

# ODISHA REVIEW

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NOVEMBER - 2020

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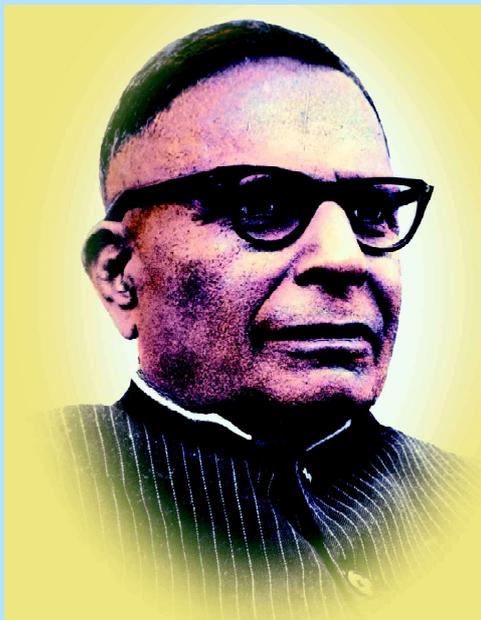
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# BIRTHDAY TRIBUTES



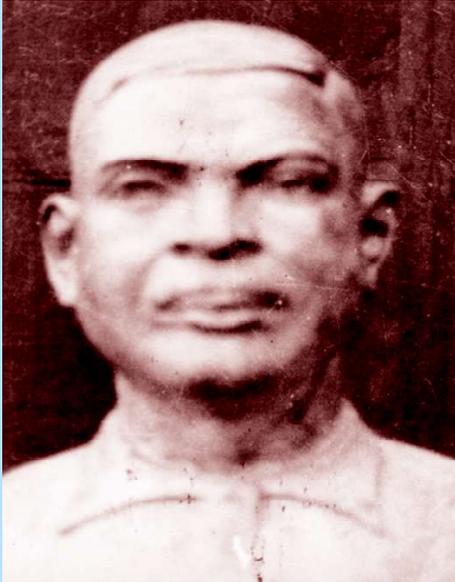
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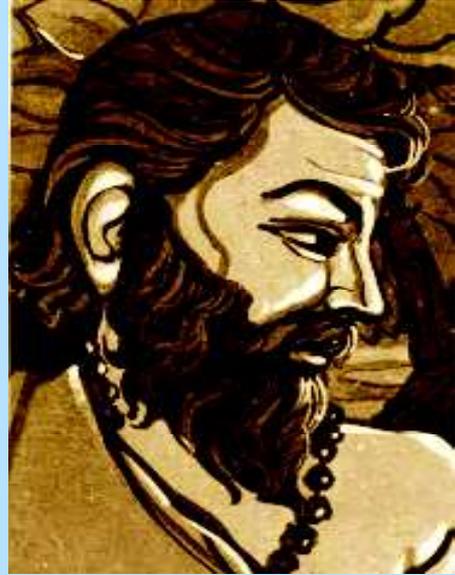
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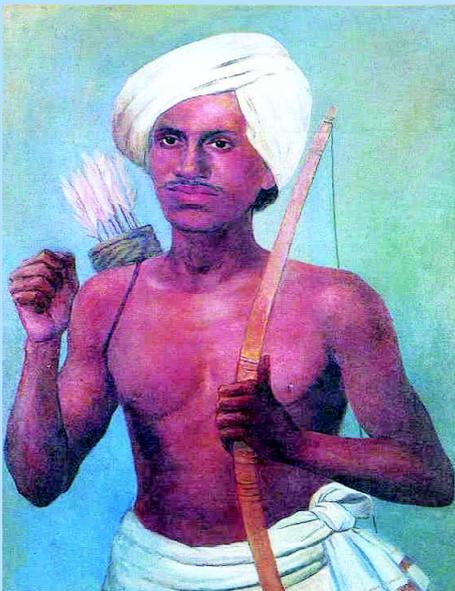
# BIRTHDAY TRIBUTES



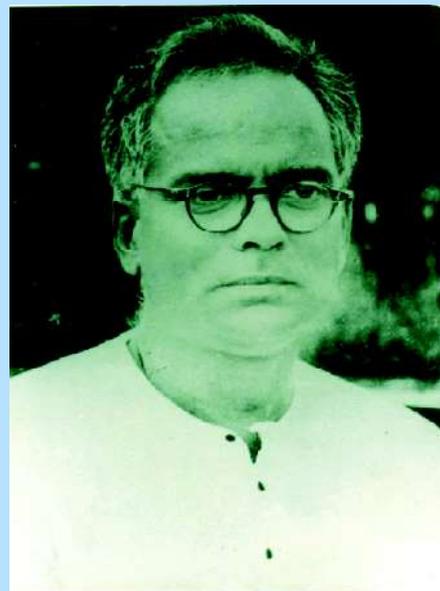
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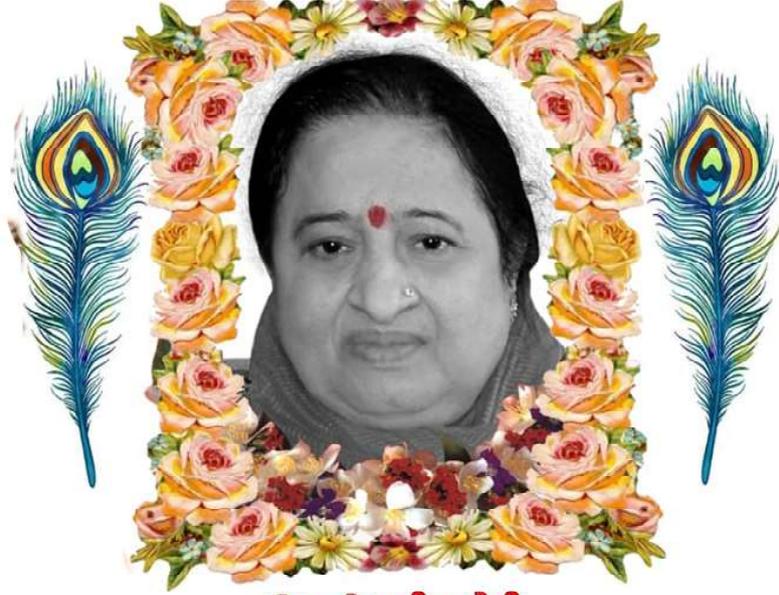


Birsa Munda



Nabakrushna Choudhuri

ॐ  
**भावपूर्ण श्रद्धांजली**



**श्रीमती सुशीला देवी**  
**06.12.1947**      **22.11.2020**

न जायते म्रियते वा कदाचि  
न्नायं भूत्वा भविता वा न भूयः।  
अजो नित्यः शाश्वतोऽयं पुराणो  
न हन्यते हन्यमाने शरीरे।

यह शरीरी न कभी जन्मता है और न मरता है।  
यह उत्पन्न होकर फिर होनेवाला नहीं है।  
यह जन्मरहित नित्यनिरन्तर रहनेवाला शाश्वत और  
पुराण (अनादि) है।  
शरीरके मारे जानेपर भी यह नहीं मारा जाता।

(भगवद् गीता अध्याय 2 श्लोक 20)



**NAVEEN PATNAIK**  
**CHIEF MINISTER, ODISHA**



**LOKASEVA BHAVAN**  
**BHUBANESWAR**

**DO NO.UM- 4 12020 -431CM**  
**Date: 19.11.2020**

*Dear Shri Gadkari ji,*

**Sub- Delay in execution of four- lane bridge over Kanupur Spill Channel at Km 173.325 of Rimuli-Roxy-Rajamunda Section of NH 215 (New NH 520) by NHAI.**

Government of Odisha has undertaken construction of Kanupur Irrigation project , a major irrigation project over River Baitarani in the state of Odisha which will create an irrigation potential of 29578 ha in the tribal dominated Keonjhar district.The project is being funded by Central assistance under AIBP. The construction works for the project has been started since 2004-05, and yet to be completed because of various problems.

At present we have completed major headwork components except the earth dam in the river gap and five blocks of the spillway. These left-over components are suspended temporarily because of the fact that a 315m long 4-lane bridge is to be constructed over the spill channel at Km 173.325 of Rimuli-Roxy-Rajamunda Section of NH215 (New NH 520) by NHAI. The NH runs parallel to the 3460m long earth dam in this portion and the above-mentioned bridge remains a major bottleneck in completion of the balance components.

It is pertinent to mention that as NHAI did not take up the work on its own after several meetings and correspondence at different levels, construction of the bridge came to the scope of Kanupur Project Authority after obtaining the consent of NHAI. Accordingly, Project Authority started the work for the tendered cost of Rs.40.68 crore out of which NHAI agreed to bear 80% and the balance by the Project Authority. But, later on, the cost of the bridge was revised to Rs.100.53 crore due to change in its design because of underground geological conditions; and this matter was brought to the knowledge of NHAI. However, NHAI did not agree to bear their share of 80% of the revised cost, so the work was stopped.

In order to resolve this matter, a meeting was held on 07.03.2019 between the Chairman, NHAI with the Principal Secretary, Department of Water Resources at New Delhi. Principal Secretary stated in the meeting that since NHAI remained firm in bearing 80% of the initial cost of Rs. 40.68cr. And nothing beyond that amount was acceptable to them, the work undertaken by DoWR is being considered for termination. He requested Chairman to take up the work at their level; and under such circumstances Government of Odisha is ready to bear the committed 20% of the original design cost of Rs.40.68 crore.

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: 2 :

After the meeting, Kanupur Project Authority has stopped the work and terminated the contract and intimated contract closure matter to the Project Director, NHAI, PIU, Rourkela to enable NHAI to initiate the construction process since August 2019. In the meantime, more than one year has elapsed, and neither the work has been started nor any response as regards to plan, program, and implementation of the bridge has ever been communicated by NHAI to the Project Authorities despite several correspondences.

Since Government at present is taking all out steps for the early completion of Kanupur Irrigation Project and is committed to economic upliftment of the tribal community by providing irrigation to the agricultural fields, completion of the bridge carries a lot of importance not only to us but also, I am sure, to Central Government.

I would, therefore, request for your intervention in the matter in providing an early solution to the issue. Any delay would lead to further cost escalation of the project and loss of benefit it is intended for.

This may kindly be treated as most urgent.

Yours Sincerely,



(NAVEEN PATNAIK)

**Shri Nitin Gadkari,  
Minister, Road Transport & Highways  
And Micro, Small and Medium Enterprises,  
Government of India,  
Transport Bhawan-1,  
Sansad Marg, New Delhi - 110001.**

NAVEEN PATNAIK  
CHIEF MINISTER, ODISHA



LOKASEVA BHAVAN  
BHUBANESWAR

DO NO.UM-96/2020-441CM  
Date: 19.11.2020

Dear Shri Saran ji,

Sub- Regarding completion of Ichha Dam & Flood moderation in Chandil Dam of Subarnarekha Multi- purpose project.

I am thankful to you for extending co-operation in providing water to Subarnarekha Irrigation Project of Odisha during Khariff season. As you know, Subarnarekha Multipurpose Project was taken up as a follow up action for utilisation of water resources of Subarnarekha-Kharkhai Basin as per the tripartite agreement made during 1978 among erstwhile Bihar (now Jharkhand) , Odisha & West Bengal. I am informed that following joint works are executed by Jharkhand:

<u>Sl No.</u>	<u>Components</u>	<u>Purpose</u>	<u>Odisha share</u>	<u>Status</u>
1	Chandil Dam across river Subarnarekha	Flood Storage for Odisha	26.47%	Completed
2	Galudihi Barrage across river Subarnarekha	For diversion of Odisha share of water to Odisha	86.20%	Completed.
3	Galudihi Right Bank Canal oftaking from Galudihi Barrage	To carry Odisha's share of water upto Odisha Border	94%	Completed.
4	Ichha Dam over river Kharkhai	Storage for Odisha share of water	26.46%	Dykes Completed. Dam Construction taken

Contd...P/2

: 2 :

In this context, I would like to bring to your kind notice that Subarnarekha Irrigation Project of Odisha will be able to utilise its full irrigation potential only after completion of Ichha dam by Government of Jharkhand. I am happy to know that Government of Jharkhand has taken up Ichha dam construction work recently. Government of Odisha will extend all cooperation for Ichha Dam construction and reimburse Odisha's share cost of dam in time.

I am informed that a sum of Rs.1026.91 crore has been paid to Government of Jharkhand for the above works till date against the estimated share cost of Odisha of Rs.1208 crore (2016 Price level). Further, I am told that 36 villages of Odisha are affected under Ichha Dam reservoir sub-mergence area at FRL 225m. Accordingly, land acquisition and R&R work in Odisha portion have been taken up. As of now, 5196 ac of land (98%) out of 5283 ac has already been acquired. Rehabilitation assistance has been paid to 1268 Project Affected Persons(PAPs) out of total identified 1369 PAPs, which is about 93%.

2. I am informed that Chandil Dam across river Subarnarekha has been completed since long but water has been stored up to RL 181.50 m during monsoon against Full Reservoir Level of 192 m due to R&R issues. As full storage capacity has not been utilised in the dam during monsoon season, we are facing flood havoc more often.

I seek your co-operation in early completion of Ichha dam for benefit of farmers of both the states and storage of water up to FRL in Chandil Dam in monsoon season for mitigation of flood in Odisha.

Warm Regards

Yours Sincerely,



(NAVEEN PATNAIK)

**Shri Hemanta Soren,  
Chief Minister,  
Jharkhand**

## 5'T' INITIATIVE

# On-line Grievance Management System in Department of Water Resources, Odisha



Hon'ble Chief Minister Shri Naveen Patnaik launched four numbers of on-line services of Department of Water Resources under 5-T initiatives of Government of Odisha on 9<sup>th</sup> November 2020. These systems will immensely help the citizens, farmers, industrial and commercial water users and beneficiaries of community lift irrigation projects. Launching the application Hon'ble Chief Minister said "Farmers are the largest beneficiary of the Water Resources Department and their grievance can be resolved quickly by these applications. Under 5-T initiatives, these applications have directly linked the farmers with the Department of Water Resources, he added." He also laid stress on creating massive awareness among the public on these online services launched for the DoWR for the benefit of farmers, industries and commercial establishments.

Among the four the first one is "Secha Samadhan" which is a **On-line Grievance Management system for citizen and farmers**. It is a citizen centric bi-lingual mobile App which will act as a bridge between citizen and the Department for grievance redressal regarding

water resources. This mobile App is available for registered and unregistered users. In the process a user can upload photographic evidence and post grievance details without visiting the office and get an acknowledgement and timeline for resolution and status is intimated to registered user through SMS. Once the grievance is uploaded, it's processing and monitoring is done through a web application. **Secha Samadhan** will help senior officers to keep track of grievances and monitor the progress. At the same time citizen gets periodic update on the status of the grievance. This application which leverages on Information Technology will go a long way in fulfilling the 5-T vision of the State Government.

**Another 5-T initiative work of the DoWR i.e Up-gradation of Go-Swift portal for on-line allocation of Water to Industries is launched.** Government of Odisha is committed for all round development of the state and water is the main input for industries and plays a vital role for industrialization. And DoWR being the administrative department allocates, regulates and controls the drawl and uses of water by industrial and other establishments as per law. Now Go-Swift portal has been updated and incorporated with such facilities and by up-gradation of this system allocation of water to industries became on-line. Previously though on-line grant of allocation of water is one of the services under Go-Swift portal which has been user friendly system, but there were no provision for phasing/ re-phasing, enhancement /reduction in allocation of water and were done offline earlier.

**On-line application also launched for allocation of Water to Commercial and other establishments.** There are many commercial and other establishments applying for water both for construction and operation purposes. DoWR has now developed on-line portal of its own i.e **waterallocationod.nic.in**. The stakeholder can apply on-line for new allocation, reduction, enhancement, phasing and re-phasing of water allocation as per their requirement.

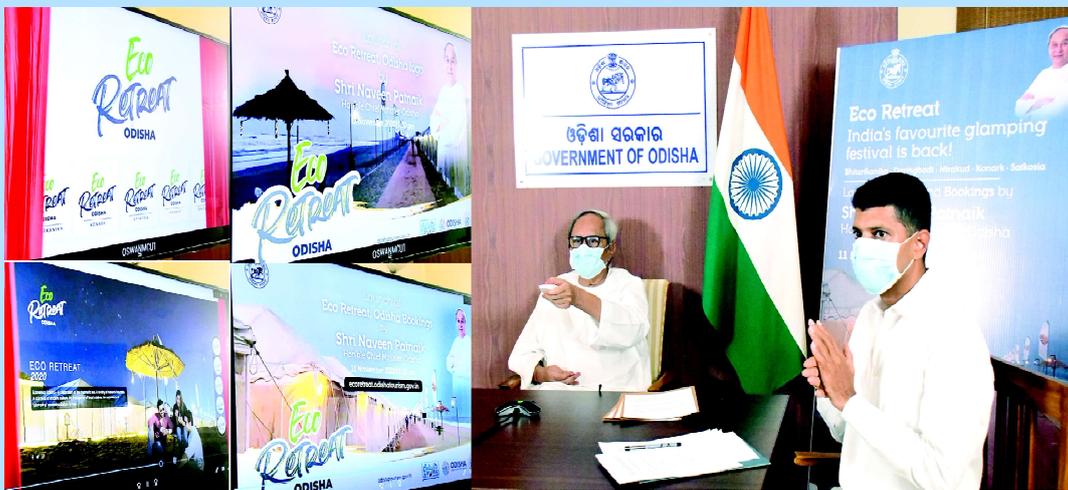
**On-line application system for beneficiaries for installation of Community Lift Irrigation Projects under the Scheme Biju Krushak Vikash Yojana** has been developed by OLIC to receive and process the demands of farmers. Before the same, the applications were received manually. By implementation of this process, the physical and financial status of 2262 CLIPs sanctioned for the financial year 2021-22 along with geo-tagging and handling over reports to proposed projects will also be updated on-line.

Shri Raghunandan Das, Hon'ble Minister, Water Resources, Information & Public Relations, on the eve of launching of these four applications for DoWR said that these services will fulfill the goals of the 5-T initiatives besides making the administration more efficient and accountable.

## 5'T' INITIATIVE

# "Eco Retreat Odisha is an Excellent Opportunity to Discover Odisha's Diverse Tourism Offerings in Style"

- *Naveen Patnaik*  
Chief Minister



Riding on the success of its debut with Marine Drive Eco Retreat at Konark a year back, Odisha Tourism's flagship three-month glamping festival was declared open to bookings by Chief Minister Shri Naveen Patnaik. The new logo was also unveiled, subtly depicting the ecological orientation.

Speaking on the occasion, Chief Minister Shri Patnaik said that last year, a benchmark was set in luxury glamping with a phenomenal success at the Marine Drive Eco Retreat at Konark. This time, he said, we have scaled it up to five unique locations – Konark, Hirkud, Bhitarkanika, Daringbadi and Satkosia. The Eco retreats will offer tourists an excellent opportunity to discover Odisha's diverse tourism offerings, in style, he added. In a note of assurance to tourists from across the country during covid times, the Chief Minister said that all stakeholders in tourism and hospitality sector across the State have been provided training on COVID-19 protocols.

Consistent with Odisha's stellar management of COVID-19 pandemic, the Eco Retreats will be in complete compliance with guidelines and standard operating procedures prescribed

**Eco Retreat Odisha is Back, Scaled Up to Five Places at Konark, Hirkud, Bhitarkanika, Daringbadi and Satkosia.**

by Ministry of Health & Family Welfare, Government of India, he further added. He urged upon the respective District Administrations to take ownership of the execution of the Eco Retreats. Raising hope for the pandemic affected tourism & hospitality sector, he expressed confidence that the Eco Retreats will provide the much needed fillip to Odisha Tourism and help it revive during this difficult time. In his address, Minister of Tourism & Culture Shri Jyoti Prakash Panigrahi said that the impact that Marine Drive Eco Retreat had created massive impact which echoed at the Tourism Minister's Conclave in January 2020. It is this fervour with which we shall keep working tirelessly to take Odisha to newer heights under the leadership of Chief Minister Shri Naveen Patnaik.

Chief Secretary Shri Asit Tripathy said that the Eco Retreat model ticks the right boxes in terms of environmental sustainability, technological leverage, teamwork, timeliness in near-perfect compliance with the good governance framework of 5T and will be transformative for each location's tourism-oriented future.

The Eco Retreats Odisha is slated to open from 08 December 2020 upto 28 February 2021. To book stays, an easy-to-use integrated portal [ecoretreat.odishatourism.gov.in](http://ecoretreat.odishatourism.gov.in) is available to tourists from across India.

## 5'T' INITIATIVE

# "Odisha is Committed to Fulfill the Healthcare Needs of its People"

- *Naveen Patnaik*  
*Chief Minister*

The Odisha Government signed an MoU with Prasanti Medical Services and Research Foundation for extension of free Cardiac treatment services to the poor and needy children of Odisha for next 2 years at Satya Sai Heart Hospital in Ahamedabad.

The hospital was roped in on 18th November 2018 for providing free cardiac services to the children of Odisha with cardiac ailments. As per the agreement, the State Government identifies and bears the transportation cost of ailing children. All the services are provided free of cost. Till now, 1019 children have undergone cardiac surgery and cured of their heart ailments. The next batch of children with cardiac ailments will be sent for treatment soon after a brief pause due to the COVID situation.

Speaking on the occasion, Chief Minister Shri Naveen Patnaik said that his Government is committed to make all efforts for fulfilling the healthcare needs of our people, especially the under-privileged and the under-served, in an equitable, accessible, affordable, transparent and time-bound manner. One such remarkable step in this direction has been to ensure that the poor people of Odisha get free cardiac treatment and are given a new lease of life, he added.

Expressing happiness over free treatment of more than 1000 patients from the state with cardiac defects since the agreement with PMSRF a couple of years back, the Chief Minister commended the foundation for its commitment to serve the humanity. In appreciation of this effort, the State Government is renewing the MoU to ensure that the poor people of our state continue to receive this critical health service, he added.

Speaking on the occasion, Supreme Court Judge Justice Vineet Saran described Odisha as his second home. It's his privilege to work anything for the state, he added. It may be mentioned here, it was Justice Vineet Saran who introduced the PMSRF to Odisha.

Chief Justice of Odisha High Court, Justice Mohammad Rafiq appreciated the selfless, charitable commitment of the Government of Odisha and the Satya Sai Heart Hospital. He

### **MOU Signed with PMSRF**

**Free Cardiac Treatment for Poor Children of Odisha at Ahamedabad Satya Sai Hospital Extended for Next 2 Years.**

said that there is no higher religion than service to humanity. Justice K.S. Jhaveri said that Odisha is very close to his heart. He wished health and wealth for the people of the State. He also appreciated the way, the Chief Minister is leading the State. Health & Family Welfare Minister Shri Naba Das reiterated the State Government's commitment to serve the people from weaker sections of society. Managing Trustee of Satya Sai Heart Hospital Shri Manoj Bhimani gave a brief account of the services extended by the institution.

All pre & post-operative care of patients at the hospital, including medicines, stents, coils, etc are borne by the Foundation. The transport assistance is provided by the State Government to the patients along with escorts referred to PMSRF, as per their eligibility under different Govt. schemes implemented in the State. I am glad to dedicate eleven new online services of MSME Department developed under 5T initiative for the entrepreneurs of Odisha. This will largely benefit the micro, small and medium entrepreneurs to avail the Government benefits and services in a hassle free manner and add on to the ease of doing business in this sector.

#### **Hon'ble Chief Minister's Deliberation**

As you know, we are pursuing transformative initiatives through use of appropriate IT solutions to ensure efficiency and transparency in the process. The overall improvement in governance mechanism has made Odisha a top destination for new investments. Even during the pandemic, we are successful in attracting investments to the tune of Rs.1.17 Lakh Crore since February 2020 with an opportunity to create over 53 thousand jobs in varied sectors.

My Government is committed to create an enabling environment for MSME enterprises and support them to realise their fullest potentiality as it is the real growth engine of our economy. As you are aware, the pandemic has created a phase of economic recession all around the world. The state economy is also facing a tough time and the MSMEs need support of the Government at this critical juncture. The State Government will certainly help them to overcome the economic crisis they are passing through.

I would like to impress upon the MSME Department to ensure that all eligible entrepreneurs are covered under various schemes implemented by the Government from time to time.

The Department should also continue its thrust on use of new generation technology and innovation for bringing transformational changes in the MSME ecosystem in the State. I wish the MSME department all success in its endeavour.

Thank you.

Bande Utkal Janani.

## *Editor's Note*



### **A GLORIOUS JOURNEY FROM 'T' TO 5'T'**

The trust, love and affection of four and half crore Odias for Hon'ble Chief Minister and Statesman Shri Naveen Patnaik is unparalleled. It has been a long journey, from a struggling State in the year 2000 to a developed Odisha in 2020. The entire country is awed at the finesse in which programmes for masses are conceptualised and executed under the leadership of our Chief Minister.

With the implementation of 5'T', now the focus is on transformation towards a new Odisha.  
An empowered Odisha where poverty will be a thing of the past;  
An empowered Odisha where women are equal partners in growth;  
An empowered Odisha which is inclusive;  
An empowered Odisha where the dream of our youth comes true.

I feel privileged along with my hard working creative team for being able to write on these development works uninterruptedly. It has been a decade since I took charge of the office of Editor, Odisha Review with the blessings of my leader and much loved Chief Minister Shri Naveen Patnaik. It is a pleasure to write now as there is a paradigm shift in the way development works are being implemented with the active involvement and support of the common man.

Odisha's time has indeed come. Thank you Hon'ble Chief Minister.

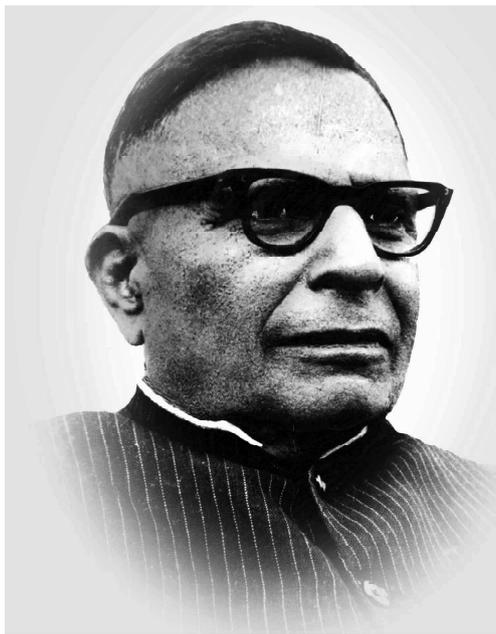
A handwritten signature in black ink, appearing to read 'Kishan Choudhary'.

Editor, Odisha Review

## Harekrushna Mahtab and the Gadajat Movements in Odisha

*Pritish Acharya*

Gadajat means the Princely States in Odia as well as in Odisha. In the early 20<sup>th</sup> Century there were strong peasant movements in the Gadjats of the State. They are known as *Gadajat or Gadjat* movements in the contemporary history. Since they were led by the *Praja Mandals* (organizations of the *ryot* peasants in the *Gadjats*), the movements were locally called *Praja Mandal Andolan*. These movements had supplemented the nationalist struggle all over the country, though our focus here would be the development in Odisha. The *Praja Mandals* and the *Gadjat* movements were largely an offspring of the nationalist upsurge and growing mass politicization in the country. Harekrushna Mahtab (1899-1987), a leading nationalist leader from Odisha, had played an instrumental role in the agitation, which ultimately resulted in the integration of the *Gadjats* in Odisha in 1947-48. The independence in 1947 had



greatly advanced the process of integration. This means, the integration or merger of the *Gadjats* in the state of Odisha would have been either delayed or hazardous and unsmooth without the proceeding *Gadjat* movements. This was also true of the nation as a whole. Like the independence of the nation and integration of the Princely states, both the nationalist struggle and the *Gadjat* agitations had supplemented each other. It is in this context that the *Gadjat* movement as a whole needs to be discussed in a holistic manner. Integration without focusing on the movement, which were like rehearsals and preparatory stages of integration or discussing the movement without highlighting the integration as the culmination of the process will be partial. Role of Harekrushna Mahtab need not escape our attention, because he had a major role throughout, right from the beginning of the *Gadjat* movement till its

culmination in the integration of the *Gadjats* in the state.

The British had conquered India at a time, when the great Mughal Empire had collapsed and the subcontinent had fragmented into hundreds of small states. Many of the states eclipsed, while many others survived in a very different form during the British period. Those which survived were called Princely states, for they were ruled by the Princes or Rajas and Maharajas. When the British decided to leave India in the mid-1940s', India had nearly two-fifths of the subcontinent ruled by the Princes. In terms of number, there were some 563 princely states within India at the time of her independence. Some of the princely states, such as Hyderabad, Mysore and Kashmir, were larger in size than many of the nations in Europe. Similarly, there were also very small princely states, whose population counted in the thousands. All the princely states recognized the paramountcy of the British Government and overtly assisted the British in restricting the anti-colonial rising in their respective areas. The British also pressurized the states for contributions to their 'War Fund' on the event of external wars. On the other hand, without any military and sovereignty these states were powerless to challenge the British, but in no way it restricted their authoritarian rule over the states' people. The British, which claimed to be the 'mother of democracy' and harbinger of modern ideas, unhesitatingly legitimized the feudal, dynastic and anti-democratic rule of the Princes in the states. Thus, India under the British rule had two kinds of India: one British India and the other princely states' India. This continued uninterrupted till the independence in 1947.

After independence, integration of the states had been essential for two reasons. One,

the new Indian nation, whose commitment to democracy and modernity and scientific temper, was beyond doubt, could not allow the feudal, undemocratic and dynastic rule of the states to continue. Second, India in fragmented form would be vulnerable to colonial and imperial conquests in contemporary time. Though India had not been one unified state in all periods of history, people outside had seen her as one culture and harbinger of a world civilization. She would lose her social and political significance unless she remained unified in contemporary time. Hence, integration of the Princely states became a need of the hour for the new nationalist leadership. The Princely states' peoples' movement preceding the independence helped the process of integration. The large scale politicization there under the impact of the nationalist upsurge created a stir for integration. Except in a few cases, such as Hyderabad, Junagadh in present Gujarat, and Kashmir, the integration was smooth in India. Sardar Vallabhbhai Patel was the Home Minister in the first cabinet of the Interim Government of free India from September 1946 to January 1950. He played an instrumental role in it.

Here it is interesting to note that the princely states, such as Umerkot, Khairpur, Swat, Chitral, Hunza, Nagor, Nur, Bahawalpur and Amb, etc., had joined the newly formed Pakistan, because they were located in the area specified as Pakistan and had been Muslim majority regions. However, many of them did not integrate with Pakistan, unlike in India, and enjoyed their autonomy till the 1960's. As a consequence, the dynastic rule alongside the Islamic Republic remained there concurrently, which weakened the foundation of the new nation of Pakistan. It was re-feudalized and fundamentalized, which ultimately turned it into a military state. It started as a religion centric non-secular state as well as a

feudal state at a time, when all modern nations in the contemporary world, eschewed such abhorrent and backward looking goal. This exemplifies why the integration of the princely states in India was so much necessary.

Coming to Odisha, there were some 26 princely States or *Gadjats* in the State. Odisha had been formed a separate state on linguistic and cultural basis in April 1936. There was a long history of Odia movement behind this. There were large *Gadjats* like Mayurbhanj, Keonjhar and Patana (Bolangir). Similarly, there were also many small *Gadjats*, such as Ranapur, Daspalla, Nilagiri and Athagarh, which were as small as a modern Block or Police Station in terms of population and area.

The linguistic and cultural identity movement, known as Odia movement, preceded the foundation of the Congress led nationalist struggle in Odisha. It could be traced to the outbreak of the Famine of 1866. The Odia movement was a nationalist upsurge, which focused on the regional development and regional identity of the people, for they were considered to be pre-conditions for national development. Though the national identity was not overlooked, the Odia movement remained very liberal throughout.

The princes and Zamindars along with the newly educated intelligentsia largely populated and led the movement. Because of the predominance of the princely class, the movement could not afford to be overtly anti-British in its programme and strategy. Further, common masses could not join it enthusiastically, because of the internal contradiction between the princely class and the people. Two aspects need a mention here. One, the princely class was in the forefront to lead the Odia movement, which aimed at the

integration of all Odia speaking tracts into one political administration, but, never bothered to merge politically in Odisha in 1936. Second, the liberal leaders, never set the merger in their agenda. This exhibited the internal contradiction within the movement and gradually created resentment among the youths and people of Odisha.

There was the Utkal Union Conference (UUC: formed in 1903), locally called Utkal Sammilani, which spearheaded the movement. Its main leaders included Madhusudan Das, Biswanath Kar and the princes of *Gadjats* like Mayurbhanj, Khalikote, Bamanda and Parlakhemundi, etc.

We could see the rise of youths and students in Odisha politics as an alternative to the liberal leadership of the Odia movement. As a group of young nationalists, they disapproved the liberal attitude. Gopabandhu Das and his Satyavadi group were the leaders, and Harekrushna Mahtab, Gopabandhu Choudhury, Jadumani Mangaraj, Atal Bihari Acharya and Nabakrishna Choudhury, etc., were the emerging vanguards of this group. These youths put forth their radical ideas within the UUC; but, did not break away from the Odia movement, which was a pan Odisha umbrella organization of all the political and social groups in the Odia speaking region. Rather they tried to convert it into a Congress organization. Finally they were successful in their effort. In 1920, the UUC merged with the Congress and the Utkal Provincial Congress Committee (UPCC), the Odisha chapter of the Indian National Congress was constituted. Gopabandhu Das was its first president. Harekrushna Mahtab was an active member; he became the first president of the Balasore District Congress Committee (DCC).

At the time, the UPCC had only six DCCs: Sambalpur, Cuttack, Balasore, Puri, Ganjam and Singbhum.

In 1921 the Non-Cooperation movement (NCM) was launched. The UPCC, in which the UUC had amalgamated, joined it. Mahtab, who was studying in the Ravenshaw College of Cuttack after completing his matriculation in Bhadrak School, left his studies and jumped into the NCM. Along with the launching of NCM, the young Congress leaders of Odisha, especially Mahtab, took up the issue of feudal oppression in the Zamindari estate of Kanika adjacent to Kendrapada. This was considered necessary for broadening the mass base of the newly formed Congress in the state. The Zamindar of Kanika was called Raja and was active as a leader in the UUC. However, his association with the linguistic and cultural movement did not dissuade him from indulging in feudal oppression against the ryots or *prajas*. The condition of the ryots was intolerable. They (ryots) paid many illegal taxes; paid some 64 kind of taxes to the zamindar. The taxes included marriage tax, honeymoon tax, fish catching tax, hair cutting tax, etc. Besides, the feudal system of *bethi* and *begari* (un-paid labour tax) continued, as in other *Gadjats*.

The news of NCM motivated the ryots to challenge the feudal system and the UPCC extended its tacit support to them. The ryots of Kanika enrolled themselves as the primary members of the Congress with the assumption that such membership would give them the necessary impunity and immunity against payment of tax. By January 1922 there were 400 primary members of the Congress in Kanika. The local Congress members had been behind the Kanika ryots, though they denied it strategically. They could

not remain indifferent to the ryots' issue. For example, Mahtab as the president of the Balasore DCC encouraged people to become Congress members in neighboring Kanika. This was a new experiment which the UPCC wanted to extend to other zamindari estates in the state in course of time. Involving the peasants was essential for making the NCM a mass movement in Odisha. The princes and zamindars were hostile to the growing anti-British nationalist upsurge, which motivated the young Congress workers to rise against the former and to integrate the anti-colonial and the anti-feudal movement into one.

Even after the suspension of the NCM in February 1922, due to the Chauri Chaura incident, the Kanika agitation continued unabated. The ryots who defied the payment of land tax were arrested and the peasants with a growing sense of fearlessness liberated them from the police custody. The Chaukidars were disrobed of their official hat and belt and were ordered to wear khadi. The entrance to the agitation centres were blocked by felling trees on the road. Finally, on 23<sup>rd</sup> April 1922 there was police firing which resulted in the killing of two ryots and in the injury of many more in Kanika.

The Kanika agitation was brutally suppressed. And the ryots, nearly 150 in number, along with UPCC leaders like Gopabandhu Das, Bhagirathi Mahapatra and Harekrushna Mahtab were arrested and sent to jail in 1922.

Officially speaking Kanika was not a *Gadjat*. But, in general perception it was a princely state. The young UPCC got involved in it, but the involvement was not open and direct. The agitation on the issue of payment of land rent had continued independently even after the official suspension of the NCM in February 1922. The police firing had taken place in April 1922. In the

Press the Zamindar portrayed it as an UPCC led NCM act. In the court, the police submitted it as a part of Congress led NCM. However, the Congress denied the charges and argued that the agitation was spontaneous, because of excessive feudal oppression and exploitation. By giving a political colour to it, the British and the Zamindar were trying to hide their authoritarian feudal rule in Kanika, the Congress leaders argued.

The Kanika agrarian agitation was an eye opener to the UPCC. In 1930's the *Praja Mandal* movements began in many of the Gadjats, such as Dhenkanal, Talcher, Nilagiri, Ranapur, Gangapur and Athagarh. Everywhere the Congress adopted the same strategy. It was there, but only in a covert manner. In fact, the *Gadjat* movements in each of the states needed special discussion, which is not the main objective of the present write up. In Ranapur, the movement had been so intense that the people killed the British Political Agent. Major R.L. Bazalgette on 5 January 1939.

In all these *Praja Mandal* movements, the young Congress leaders, such as Nabakrushna Choudhury, Malati Chaudhury, Harekrushna Mahtab and the Communist leaders such as Pran Nath Patnaik, Ramkrishna Pati and Bhagabati Panigrahi, actively participated. Through their involvement they tried to bring a discipline in the agitations. They intended to give a non-violent form to them. However, some scholars conclude that such Congress involvement in covert form was designed to check the aggressiveness of the ryots, so as to perpetuate the nationalist control and hegemony over them. Their strategic motive was to curtail the militant nature of the agitations, these scholars argue. But, as it is seen, the young nationalists saw it (tacit support) as a pragmatic approach. Resorting to

violence by the peasants always result in brutal violent repression by state authorities, due to which the agitation is short lived and the oppression and exploitation continued. Mahtab in his autobiography *Sadhanar Pathe*, has explained it in very clear language. He had rushed to Ranapur soon after the killing of Bazalgette to save the situation. He feared, many innocent ryots would be tortured by the police hereafter. He made all efforts to save them. However, the British tried to implicate him in the case.

In 1937, the Congress formed the ministry in Odisha. Soon after that the *Gadjat* agitations intensified, largely because the *Praja Mandals* and the people there developed a sense of immunity in the changing scenario. Similarly when the ryots from the *Gadjats* migrated to British Odisha, the Congress ministry under Biswanath Das gave them protection in 1937-39. The coming of the Congress into the ministry made the states' people confident to fight against the oppression and exploitation. Relative lack of hostility from the provincial administration was a great help to them. They had fled away to the British Odisha to escape Princely repression. It is also to be noted that though Mahtab was not in the ministry, he was the supreme leader of the UPCC in the 1930's. In 1930-31 and again in 1937, he was its president. In 1938, he was a member of the Congress Working Committee (CWC) and was at the helm of affairs of the party. Everyone in the state and in the Congress knew that it was Mahtab who ran the show of the ministry from behind.

In 1938, the Congress constituted an Enquiry Committee to look into the states' peoples' issues. Mahtab was its president. The committee had recommended the cancellation of Sanads of the rulers and merger of the princely states with India.

During the Quit India Movement, the *Gadajat* movements became intense and broke the political divide between the *Gadajats* and British Odisha. The princes, who had restrained the people from joining in the Congress until then, had no control over it. After the 'Quit India' India's independence was only a matter of time. Because of the *Gadajat* movements the integration of the states was also very imminent. When the Interim Government was formed under the leadership of Jawaharlal Nehru, a Congress ministry was set up in the province. Fortunately Mahtab headed the ministry and was the premier (later on it was called Chief Minister) of Odisha from 23 April 1946 to 12 May 1950. During this period all the *Gadajats* were integrated with Odisha. This was the second Congress ministry in the State. Besides Mahtab the ministry had four other ministers. They were Nabakrushna Choudhury, Lingaraj Mishra, Nityananda Kanungo and Radha Krishna Biswas Ray. All these Congress leaders had been one with Mahtab on the issue of integration. Nabakrushna and Mahtab were in the *Gadajat* movement right from the beginning.

Soon after the formation of the Congress Ministry, Mahtab wrote to the Cabinet Mission formed under the chairmanship of Sir Safford Cripps about the *Gadajat* issue on 26 April 1946. In the letter he had vociferously argued for their integration.

In November-December 1947 the *Praja Mandal* movements began once again in Nilagiri, Hindol, Talcher and Dhenkanal. Their main demand was merger of the *Gadajat* with Odisha. Mahtab sent the military police to Nilagiri to pressurize the local prince to accept the merger proposal on 14 November 1946. Nilagiri conceded and agreed for merger. It was a pressure tactic, which worked successfully and became a

learning lesson to Sardar Patel, who as the Deputy Prime Minister of India in the Interim Government, was looking for some graceful ways for integration of states after independence. On 14 December 1947 Patel visited Odisha. In the presence of the *Gadajat* Princes and many others, he gave a veiled warning that unless the princely states agreed to integrate; the Indian Government would not extend any support to them in case there were peoples' agitations. The Princes put forward some demands as pre-conditions for their merger. Patel did not concede to any of their demands. Mahtab was solidly behind him. As a result, by 1 January 1948, all the states except Mayurbhanj, Saraikela and Kharsuan merged with Odisha. The day (1 January 1948) was celebrated as *Gadajat* Liberation Day in Odisha. The *Gadajats* which merged were: Gangpur, Bonai, Bamra, Keonjhar, Rairakhol, Sonapur, Athmallik, Talcher, Pallahara, Patana, Boudh, Dhenkanal, Hindol, Daspalla, Narasingpur, Baramba, Athgarh, Tigiria, Nayagarh, Khandapada, Ranapur, and Kalahandi. Nilagiri had merged earlier. Mayurbhanj agreed to merge on 16 October 1948. From 1 January 1949 it became a part of Odisha. The other two states, Saraikela and Kharsuan, adjacent to Mayurbhanj merged in Bihar. Thus, the merger could be possible without any violent incidents, largely because of the leadership of Harekrushna Mahtab. The Princely states, such as Changbhakar, Koriya, Surguja, Joshpur, Udaipur, Raigarh, Sarangarh, Kawardha, Khairagarh, Nandgaon, and Kanker, which were adjacent to Odisha, merged in Central Provinces. Later Madhya Pradesh was carved out of it. In 2000 this region became Chhatisgarh.

To conclude, Harekrushna Mahtab was an individual. Any generalization ascribing the credit only to him for the merger of *Gadajats* with

Odisha would be un-scientific and a-historical. An individual cannot be the decider of his time. He is only a product of his time. There lies the significance of his role in history. Even Mahatma Gandhi was no exception to it. However, the individual also cannot be ignored of his contributions in the making of his time. It is a fact that, there had been strong resentment against the feudal oppression and exploitation in the *Gadjats*. The merger and integration of the states with the Indian nation state was its natural outcome. The movement and the merger were integrated issues. One cannot be isolated from the other. Similarly, the people and the leaders were also inter-related in the movement. Resentment by the people against feudal and colonial oppression and coordination of the popular resentment by the leadership were equally important in taking the movement to its logical conclusion. Setting the participants inclusive of workers and leaders in any hierarchical order would be un-scientific and a-historical. In their own ways, leaders like Harekrushna Mahtab have significantly contributed to the merger. The states' people played the main role in converting the resentment into a strong mass movement. Harekrushna Mahtab always supplemented the movement. He was not alone in this historical event. Other young and radical leaders like Nabakrushna Choudhury, Malati Chaudhury, Sarangadhar Das, Surendranath Dwivedy, Pranath Patnaik and many others were together

in this sojourn. The integration of *Gadjat* states was a collective achievement of the local and provincial Congress leadership; *Gadjat* integration could be generalized as a collective achievement of the local people.

In this regard, the merger of Saraikela and Kharsuan with Bihar in May 1948 needs a special mention. The two states were ruled by Princes, who traced their origin to Odisha. There was a significant Odia speaking population in both the states. On the basis of this, they were considered to be part of Odia speaking tracts or natural Odisha. In 1936 when Odisha was carved out as a separate state, they were notionally with Odisha.

However, when the merger movement was intense, the tribals there demanded a separate tribal state. Sonaram Soren and Ramachandra Majhi were the main tribal leaders. Jayapal Singh, another well known tribal leader, was also active in the tribal movement. Due to this, ultimately the two *Gadjats* could not merge with Odisha; they merged with Bihar and later on became a part of the newly formed state of Jharkhand in the year 2000.

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## At Bhitarkanika - A Tryst with Nature

*Lipsa Mohapatra*

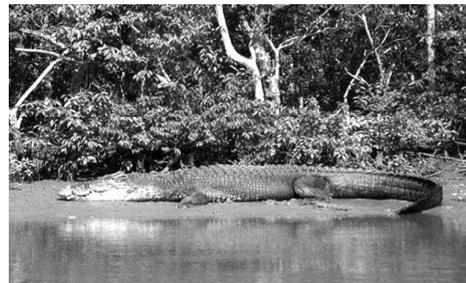
That day like never before  
 Sitting on the ferry, in the middle of an estuary  
 At Bhitarkanika, we watched the sun going down.  
 The breeze was salty, caressing our tired souls.  
 The magnificence that surrounded us,  
 conquered the vanity of our worlds.  
 Our puny selves made no difference  
 to the gigantic crocs, that lay on the banks,  
 Or the colourful fishes and birds.  
 Immersed in its vastness and abundance,  
 Silence befell.



In awe and admiration we could speak no more,  
 How less did we know, the secrets of their world  
 unfurling between the meandering creeks,  
 the mangroves whispered and laughed,  
 vilifying us ruthlessly. The backwaters rushed and turned its course,  
 shoving towards the sea.

The ferryman held his oars tight, to gently row the boat.  
 Struggling against the low tides to stay steady and afloat.

The tangerine sky boasted with pride,  
 its canvas painted with love  
 The flight of birds chirping their way back home,  
 filling the expanse with a trove.  
 The romance of nature,  
 its undulating abundance encapsulated the mysticism,  
 the world around us had had.



The clandestine affair burnt down our pride, etching in our memories,  
 A melancholy story of a tryst with nature we never before had.

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Lipsa Mohapatra, NIFT, Bhubaneswar.

## Paradip the Pioneer of Indian Ports

*Prabhat Kumar Nanda*

Sir W. Raleigh, the notable statesman has rightly said that, “Whoever commands the sea, commands the trade. Whoever commands the trade of the world, commands the riches of the world and consequently the world itself.” The trade plays an important role in the sustained economic development of the country. If the trade is considered as a chariot, the transport system is the wheel, which makes the system to achieve success. The transport system of any country comprises several systems as rail, road, shipping and air devices. Out of such systems, the maritime trade plays a vital role.

Our country has the coastline of 7515 kms, spread on eastern, western coast of main land and islands. The maritime trade is managed through twelve major ports and two hundred non major ports. It is surveyed that about 95 per cent of the cargo by volume and 68 per cent by value is moved through maritime transport. The water transport continues to remain unchallenged as the most efficient means of transport of the world. Therefore the ministry of shipping was specifically formed in the year 2009 as the independent ministry to recognise the importance of water transport, ship design, construction of ports and harbours. Out of twelve major ports of India, our state Odisha is blessed with the major port of

Paradip. Dhamra and Gopalpur are two non major ports of our state. Our state has a coastline of 480 kms from Andhra Pradesh border in Ganjam District to West Bengal border in Balasore District.

The proposal for the construction of the Port at Paradip came to light after independence. The creation of a port at the east coast of India between Kolkata and Vishakhapatnam was of urgent necessity and it was mooted by the Govt. of India ever since 1948 after the independence of our country. According to the Ports Technical committee recommendation, the investigation was done to find out the infrastructure that, river mouth of Mahanadi at Paradip was the most suitable place for a deep sea port at the coast of Odisha. That was subsequently confirmed, more or less, by the findings of the foreign experts from France, Japan and Britain. But the steps for the construction of the Port were inordinately delayed for a period of 13 years since its beginning in 1948. However, in the long run, the final decision was taken for the establishment of the Port by Govt. of India and the foundation stone was laid by the then Prime Minister of India, Pandit Jawaharlal Nehru in 1962 through the initiative of Biju Pattnaik, the then Chief Minister of Odisha.

Apart from the investigation of the Ports technical committee, the central Water and Power Commission (CWPC) was entrusted by the govt. to find out suitable location of a Port at the east coast between Kolakata and Vizag as there existed no Port between the two on the coastline of 850 kms. The survey was undertaken by the commission in 1950 through the initiative of Govt. of Odisha and the recommendation was made by the commission (CWPC) for the location of the Port at the mouth of the river Mahanadi. Again, the central govt. engaged the French Technical Mission for the selection of a site for the Port in 1951 and that mission recommended the river mouth of Mahanadi to be suitable for the establishment of the Port. Meanwhile, another report in the hydrographically charts for the placement of the port was presented by the Indian Navy in 1951 indicating the ideal location of the site for the Port at the mouth of the river Mahanadi. Besides these findings, Central Water & Power Research Station (CWPRS) at Pune in their model study expressed the views regarding the location of the lagoon type harbour at the coast of Paradip. In addition, it may be stated that National Harbour Board held at Pune in April 1954, under the chairmanship of Lal Bahadur Sastri, Transport Minister, Govt. of India decided to carry out a model study to finalise the most suitable harbour at the mouth of the river Mahanadi. The findings of the survey by the officer, Sardar Kartar Singh had indicated the financial and technical feasibility of the project for the Port at Paradip coast and also a full-fledged analysis of the findings was published in the Indian Journal of River Valley Development under the caption, 'Development of Navigation on the Mahanadi'. Further, the State govt. of Odisha had engaged the reputed company of Japan, M/S the Kinoshita & Co. to conduct the study on the

assessment of mineral deposits around Tamka-Daitari and possibility of the exports of iron ore with linkage through the Paradip Port. The study conducted by the company in 1956 recommended for the placement of the harbour at the mouth of the river Mahanadi estuary. But ultimately, Intermediate Port Development Committee by the govt. of India recommended for the establishment of a minor port in 1958 at Paradip and in the same year Paradip was declared as a minor Port to act as the fair weather anchorage Port to export Iron ore.

The potentiality of the Port in exporting Iron Ore from Sukinda and thermal coal from Talcher was considered very significant because of its strategic location around mineral belts of Odisha. The export of Iron ore from Sukinda to Japan and thermal coal from Talcher to southern and western States of India through the sea routes played very important role for the construction of Paradip Port. The Iron ore deposits within 150-400 kms from Paradip set an added merit to the potentiality of the port. In this context, the findings of the NCAER (National Council of Applied Economic Research) in 1963 relating to the economic aspects of the development of the Port seem worth mentioning, "Given suitable road and rail links with Paradip, the end cost of delivery of Iron ore from mining area to the Port can be the lowest for any port on the east coast and with one or two exceptions such as Goa in the country as well."

Meanwhile, at the initiative of government of Odisha in 1958, a team of experts from Japan in collaboration with the University of Tokyo, conducted a model study and submitted a comprehensive report in favour of the establishment of port at Paradip. Since then, the State government took initiative in cooperating

and coordinating with the Central Government time and again for the establishment of a port at Paradip. In this context, it is worth mentioning here that, the role of freedom fighter Narayan Birabar Samanta was also important for co-operating with the hydrographic survey at the Mahanadi river mouth. Besides, he also published some articles in the local newspapers regarding the economic growth and potentiality of the hinterland of the port. He had been in touch with the State and Central government agencies in respect of the establishment of the port. Ultimately, a master plan was drawn up for developing a port at Paradip in 1961 through the help of British consulting engineers, M/s Rendal, Palmar and Triton in 1961 by the initiative of Govt. of Odisha.

The final decision was taken in that year for a deep sea port at Paradip by the Govt. of India. Though the decision was taken for the establishment of the port after the recommendation of the experts, the construction of the port could have been further delayed as there was no financial sanction and approval by the planning commission to that effect. However, the decision for the visit and inauguration for the port by the Prime Minister of India was possible due to the dynamic leadership of Biju Pattanaik (the-then Chief Minister) for his political and personal relationship with Pandit Nehru. On the occasion of the visit of the Prime Minister of India, for laying the foundation stone for the Port at Paradip, a meeting was held on the premises of the Bana Bihari High School, Kujang on the 2nd January 1962 under the presidentship of Biju Pattnaik, in which both Ratnamali Jema, M.L.A and N. B. Samanta were present. The decision for the establishment of the port was declared amidst the loud cheers of joy among the unprecedented crowd. Ratnamali Jema presented a decorated ship made of silver to the

Prime Minister in the meeting. On the preceding day, that is on 3rd January, 1962 the foundation stone for the port was laid by the Prime Minister at the selected site in the presence of large number of officials of the State and Central Government including the dignitaries and huge local crowd and he dedicated the port to the people of India with the following proclamation, “Willed by the people I commend you, to this yet another National Adventure”. Metaphorically speaking, this occasion seemed to have symbolised the linkage between the old glorious regional maritime tradition and the modern India naval excellence.

Certainly, it would be a matter of missing link and unwritten event in the history of the Port if the interesting episode relating to the approval of the plan and design for the Port from Prime Minister, Pandit Nehru is not narrated. It is very amusing and interesting to note that while Pandit Nehru was in a relaxing mood in the steamer on the 3rd January the scheduled day of inauguration near Nehru Bungalow, Biju Pattanaik could be able to get the signature of approval for the project of the Port keeping the map on the back of the body of Nilamani Routray, the commerce Minister of the State govt. In the words of a close associate of Biju Pattanaik and M.P. from Odisha, the story of tactical deal runs thus: “The time was a first approaching evening winter of 1962 and the Sun was setting. Pandit Nehru stood at the deck and he was completely overwhelmed at the setting glamour of the Sun on the sea. Just at that time Biju Babu slowly moved towards Pandit Nehru with a map in his hand and broke his silence with the word, ‘Panditjee’. Pt. Nehru who was then oblivious of the outside world expressed annoyance at being disturbed abruptly in the midst of his aesthetic meditation. Biju Babu replied; if Prime Minister of India spares two minutes time,

the destiny of two crore Odias will change forever. Pandit Nehru expressed desire to know the fact. There was no table on the deck of the steamer and Biju Babu had no patience to wait. He asked his good friend the commerce minister, Nilamani Babu to put his hand on the deck so that his back could be used as a table where Biju Babu spread the map and explained rich maritime history of Odia Sadhabs along with the proposal for a sea born lagoon type port at Paradip, where he needed his signature and Pt. Nehru obliged generously without any further inquiry.

The dazzling plaque placed on a pillar at Nehru Bungalow exists till today and it bears the first Prime Minister's message to the nation implying revival of glorious maritime tradition of the country. The newly constructed building for that occasion remains today being termed as Jawahar Guest House which once upon a time accommodated the VIPs like Prime Minister. Pandit Nehru, Governor, Y.N. Sukthankar, Chief Minister, Biju Pattanaik, commerce Minister, Nilamani Routray and some other official dignitaries as its first guests. The Jawahar Guest House is the first masonry construction on the virgin land of the selected site. In fact, at present, the foundation stone which was laid at a site located at the distance of about 3kms from the confluence point of the river Mahanadi (Hettamundia) has been shifted from that place due to threat of erosion and it is now placed in the premises of Jawahar Guest House.

The construction of the port started from 19th Nov.1962. As a matter of fact, the establishment of the port was possible due to sole initiative, decision and determination of the then chief minister, Biju Pattanaik in spite of financial crisis of the state government. It is worth mentioning here that, Biju Pattanaik is not only

known as a freedom fighter and pioneer in the national struggle for independence but also his contribution to overall economic development of the state of Odisha remains unparalleled in the history of modern Odisha.

The construction of the port was taken up on war footing by the State government under the dynamic leadership of Biju Pattanaik in the revenue village Sandhkud basing upon the report of stability of the seashore. Prior to the construction, the land was acquired for the purpose within a very short span of time through the procedure of the Govt. notification by the special direction of the Chief Minister.

Contrary to the general procedures followed in the acquisition of land from the public and private sectors of industries or for any developmental projects, the land for the Port was acquired by the Govt. under certain exigencies of the circumstances due to special initiative of the Chief Minister for the establishment of the Port. Thus the steps were taken accordingly on the basis of emergency. Both the forest land and private land were utilised for the purpose and the land under the private ownership was acquired through proper notification and payment of compensation.

No resistance or any kind of agitation was exhibited in any form by anybody in view of the public support at large for the construction of the Port. The total acreage of land acquired for the Port, both the Govt. and private ownership to the extent of about 8156.96 acres was found to be incorrect. In the long run, after proper verification and estimate from the govt. records, ultimately the total acreage of the land to the extent of 6285.54 acres was settled up and finalised in favour of the Port Trust.

The entire machinery of the govt. was geared up and diverted towards the construction of the Port. At that time, the govt. was facing financial hardship on account of natural calamity of drought. But the Chief Minister braved the situation and an amount of 20.3 crores was spent from govt. exchequer for the construction of the Port. During the initial stage of construction, the attention was also paid towards creating communication facilities by the road to the sites of the mineral deposits. With that end in view, the construction of the Express Highway from Paradip to Daitary was started in 1962 in spite of financial deficit of the State Govt.

The full-fledged infrastructures of the Port could not be completed in time due to want of requisite funds. At last, at the request of the State Government, the Government of India took over the management of the Port since 1st June 1965. The Port was declared to be navigable by Peter Stambolic, Prime Minister of Yugoslavia with the entry of the Naval Vessel, INS INVESTIGATOR on the 12th March, 1966. Paradip Port was declared as a major port on the 18th April, 1966 as per the notification no. GSR 614 dated 18.4.1966 Govt. of India. A Trust Board was constituted for the port under the Ports Trust Act, 1963 for the management of the Port on 1st November 1967. The first Board of the Trustees was appointed by the Govt. of India under the chairmanship of Kartar Singh.

The Paradip port is situated at latitude 20<sup>0</sup> - 15'-6", N longitude 85<sup>0</sup> - 40'-35" East. It is located at about 10 kms away southwest of False Point. The distance via sea route from Calcutta and Visakhapatnam and Chennai are 210, 216 and 598 nautical miles respectively. The port is 122 kms. from Bhubaneswar and 90kms from Cuttack. The nearest airport is at Bhubaneswar.

At present, the Paradip Port is one of the major ports and occupies second position among all the major Ports of India as far as the volume of cargo handling in the last financial year (2019-2020).

There altogether 20 (twenty) berths with 3 (three) single point moorings, are operating. The Paradip Port is situated strategically to serve the hinterland spreading across India in the States of Jharkhand, Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Bihar and West Bengal. The Port is involved in carrying business of various cargoes such as Crude oil, POL Products, Iron ore, Thermal Coal, Chrome Ore, Coking Coal, Manganese Ore, Charge Chrome, Scrap, Fertilizer, Fertilizer Raw materials, Clinker, Gypsum, Project Cargo and containers. The Port crossed 57 million tones of cargo in export and import for the first time in the year 2009-2010 as its glorious achievement.

To state in precision, the depth of any Port is primarily responsible for earning reputation far and wide for its dynamic role. The depth of the approach channel Paradip Port is measured to be 18.7mtrs. and under the existing state of its operation a large vessel carrying cargoes to the tune of one lakh metric ton can enter into the Port because of continuity of depth of 17.1 mtrs in the channel of the Port. Thus, the Paradip Port is fortunate enough to have this opportunity at the entire eastern coast line of India. At any time the sea depth (draught) can be increased at a very low cost because of sandy nature of the soil at the bottom level. Further in view of feasibility and natural strength of the Port, it will be capable for handling cargo to the tune of 325 million tonnes by the year 2025. Undoubtedly, the Paradip Port stands for its glorious achievement and bright future due to its strategic geographical location and Nature's gift.

Port facilities consist of mechanical coal handling plant, Iron ore handling plants, General cargo Berths, Oil Jett, Fertilizer and petroleum products handling berths, Rollon Rolloff Jetty and oil handling mooring Points. All berths are equipped with high power cargo Handling Equipments. The Port has 19,99,515 sq mts open stackyard and two warehouses of 7711 sq mts area. The Port has own railway system with seven loco motives. There is 7.4 kms route length and 85 kms track length in the port area. Paradip Port is a ISO 9001-2015 certified and ISPS compliant port.

All major ports of India have handled 704.650 million tons of cargo in the financial year 2019-2020. Deendayal (Kandla) port has

handled 122.499 million tons of cargo as the highest volume of cargo, where as Paradip Port has handled 112.689 million tons of cargo securing second highest volume cargo handling of our country.

With continuous increasing trend in modernising the port and natural draught facility to accommodate bigger vessels, Paradip Port will no doubt achieve the laurel of highest volume cargo handling port of India within a period of couple of years and will be the pioneer of major ports.

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Prabhat Kumar Nanda, 'Atithya', MIG-I-227, Satyasai Enclave, Lane-22, Kolathia, Khandagiri, Bhubaneswar-751030.

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## The Regime of Terror

*Sonali Mohapatra*

I was not there  
but I heard it all  
felt it all  
Paris fell and so did we  
Baghdad and Mumbai  
and Lebanon and Syria.

At the end somebody wins  
builds an empire of skeletons  
and empty eye holes  
loses his mind sitting on a  
burning pile of shit.

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## The Mountain Mahendragiri - An Eco-Heritage Tourist Destination

*Dr. Sunil Kumar Patnaik  
Sarita Nayak*

There are several mountains associated with history, culture and civilization of any country or region. In India number of such mountain peaks starting from the Himalyan Badrinath, Kedarnath to the Vindhya, Sahyadri and Satpura hills ranges which have some element of historical footprints which are all depicted in the Epics, Puranas, and other literatures together with visible archaeological remains. Among the mountains of Odisha, the most important is the Mahendra mentioned in the great Epics and Puranas as *kulaparvatas* of India. The mountain Mahendragiri is located in the Gajapati district of Odisha in the middle of Eastern Ghats which is part of almost an unbroken chain of hills between the Mahanadi and the Godavari rivers, but in their southern parts they occur as detached hills. The structural trends and litho-stratigraphy of the Archean-Early Proterozoic rocks arech-carnokite-khondalite which is one province out of six such provinces of India. In general the Eastern Ghats extends from the Mahanadi in Odisha to the Vaigai in Tamilnadu, roughly paralleling the eastern flank of Peninsula behind the coastal tract on the Bay of Bengal.



*Bhima Temple*

The Eastern Ghats is divided into a northern and a southern portion, the dividing boundary is lying somewhere south of the Godavari Valley. True mountain character is exhibited only in the northern portion i.e. up to the Godavari Valley. The Eastern Ghats (North) is comprised of Maliya and Madgula Konda Ranges. The Kondhmal Hills are from their northern tip and the Rampa Hills in the south. The Kondhmal Hills have lent their name to the Khondalite rocks which make up the peaks and ridges of the Maliyas, whose general elevations are 900 to 1,200 meter though some of their summits soar higher and the tallest is Mahendragiri which is 1501 meter high. It may be mentioned that the name Mahendragiri once extended to the whole of Eastern Ghats. Archean gneisses have developed in the lower elevations of these hills.

It is situated amongst the Eastern Ghats at an elevation of 1,501 metres (4,925 ft) and is one of the highest peaks in eastern India, only next to Deomali (1762 mts) of Koraput district. It is the second highest peak measuring 4923 feet and the highest peak Singharaj (4976 ft) and the third

Devagiri (4534 ft). The Eastern Ghats run as detached hills, more or less parallel to the eastern coast of India with an average elevation of about 200ft. Mahendragiri is a natural wonderland and is surrounded by hills and thick forest growth. The hill is situated amongst the Eastern Ghats at an elevation of 1,501 mt. above mean sea level with geo-coordinates  $18^{\circ} 58^{\prime}$  N and  $84^{\circ} 22^{\prime} 05^{\prime\prime}$  E. As per the Odisha Space Application Centre the core area could be spread over an area of 42.54 Sq. Km. while the buffer zone has an area of 1577.02 sq. km.

The major river in the area is the Mahendra Tanaya, originated from the hill top of Mahendra Mountain and is also characterized by the presence of numerous rivers and rivulets which empty into the Mahendra Tanaya which ultimately falls into the Vamsadhara in Andhra Pradesh. The vegetation

of the region is marked with the presence of tropical dry and wet deciduous forest range which is a home to several plants and wild animals and avian fauna. The principal rock types of the hill range are granite, charnokite, khondalite with intrusive veins of chert, chalcedony, quartz of both crystalline and opac forms. Mahendragiri hill and its surrounding areas are recognized as a biodiversity hot spot due to numerous medicinal plants and other species that are found here. A heaven for medicinal plants, Mahendragiri Hill is home to over 600 flowering plants. The faunal diversity of the region is huge and particularly known for being a herpetic-faunal hot spot. The



*Yudhisthira Temple*

fauna of the region includes peacocks, flying squirrels, deer, elephants, various avian species (leopards). From the hill-top trekkers are rewarded with a mesmerizing view of the surrounding. The Eco system of the hill and the undulating landscape with serpentine roads are just heaven for any visitors. It has something to be relaxed and rejuvenate to all kind of tourists be young or old.

### **The Mountain**

The magnificent mountain Mahendragiri stands as the dosimali stone of the provinces of Odisha and Andhra boarder in Ganjam and Gajapati districts of Odisha and Srikakulam district of Andhra Pradesh. Mahendragiri is 51 kms to the south-west of Brahmapur, 26 kms from the sea. It is approachable at Tumba from Brahmapur side, at Kainpur from Parlakhemundi side and at Jangalpadu from

Srikakulam side. More easiest way to ride Mahendragiri mountain is from Paralakhemundi Dist. Headquarter which is about 50 kms enroute Narayanpur, Jiranga, Kanipur and then about 20 kms on the undulating hill terrain to reach at the flat land on the peak where temples of ancient past with archaeological remains available. Mahendragiri mountain is also very close to Ramagiri and Gudguda waterfall. The mountain is important from mythological, religious, historical, archaeological, ethnical, ecological and tourism points of view. It is a famous centre of pilgrimage since time immemorial. Every-year during Sivaratri (Feb-March) thousands of

pilgrims from neighboring Ganjam and Srikakulam districts usually visit and gather on the peak for celebration. The local *Adivasis* or ethnic people also gather here on that day in large number. In our recent visit in March 2020 to the site, we witnessed that many people from around Andhra Pradesh and Odisha throng the place, particularly for ritualistic purpose in the age-old traditional Parasurama *kshetra*. But historical evidences are there which reveals the cultural depth of the place when nowhere temples constructed in entire Odishan region, there constructed the earliest temple in about 6<sup>th</sup>-7<sup>th</sup> century CE which again proves the historicity of the place.

Let us have a glimpse of the traditions and history associated as known from the archaeological sources. Due to the strategic location of the Mahendra mountain, many early kingdoms were established around it for which the mountain has rich tradition, referred to in copperplate grants (charters) and inscriptions as well as reflected in visible archaeological remains that all speak a loud about the rich cultural legacy. Almost all erudite scholars, starting from Pragiter, Pliny, H.C. Ray Choudhury, B.C. Law and historians and archaeologists of Odisha like D.K. Ganguly, R.P. Mohaptara, B.K. Ratha and some others have focused some aspects of Mahendra Mountain. The mountain is so important in the cultural history of Odisha which served as an important benchmark for the study of history and culture of Odisha and even for South-East Asia. An account of the Mahendragiri

is discussed here, taking together the reference in Copper Plate Charters and all the material remains available in the site in recent perspective.

### Associated Traditions

The Mahendra mountain has been eulogized by several hymns and religious texts as a sacred place and is the abode of Lord Shiva. The cultural assemblage of the region is also quite rich with strong traditional values reflected in the rituals, traditions, customs, practices and ethno-historical parallels. Mahendragiri is associated with

mythological stories from the Ramayana as Mahendra *Parvata* (mountain). It is a *Kula Parvata* along with Maninagesvara, Malaya, Sahayadri, Parijata, Shuktiman, Vindhya and *Malyavanta*. The *Mahabharata* mentions Mahendra mountain while describing Parasurama's penance. The story goes

that Parasurama, the youngest son of Jamadagni, exterminated the *kshatriyas* from the earth twenty-one times. Then he performed a sacrifice at Ramatirtha with Kasyapa the *Upadhyaya* (preceptor). After completion of the sacrifice, he offered the earth as his fees to Kasyapa but Kasyapa became angry and banished him to the southern seas. As a result Parasurama went to Mahendragiri and practiced penance and lived for a long time here. It is also said that Parashurama was meditating on Mahendragiri when Lord Rama broke the sacred bow of Shiva. Ramayana and Mahabharata also refer this mountain in various contexts. The Vamana, the Vishnu, the Markandeya, the Agni and the



*Kunti Temple*

Skanda Puranas also refer Mahendra Parvata. It is in fact that no Purana is complete without mention of the Mahendra Hill.

The *Viraja Kshetra Mahatmya*, presents a traditional account of Odisha in connection with the killing of Gayasura by Vishnu. The legs of Gayasura fell at Mahendragiri. Even Kalidasa in his *Raghuvamsa* mentions that king Raghu in course of his *digvijaya* conquered Kalinga and occupied the Mahendra as king of Kalinga was the lord of this mountainous region. It is mentioned that Raghuvamsa of Kalidasa contains an interesting episode of Sunanda and princess Indumati.... “Would you marry this prince – he is Hemangada, the king of Kalinga, said Sunanda, the companion of princess Indumati. Sunanda elaborated further “He is the king of Mahendra Mountain and Mahodadhi (lord of Sea). If you marry him you will get the fragrance of cloves from his body that is because cloves are imported to his kingdom from far off islands. Guhasiva of the Puranic fame was ruling over Kalinga-Visaya and Mahendra during the age of Gupta.

One more important tradition is associated with the Southeast Asian Country of Funan or Cambodia with mount Mahendra. It is referred to in a number of Copper Plate Charters of various dynastic rulers of this area that land donations were given to Kaundinya Brahmans who were living around Mahendragiri region in 7<sup>th</sup>-8<sup>th</sup> centuries CE. It is very interesting that Kaundinya Brahmans still continue to live near Mahendra Mountain range of Odisha. Even a peculiar custom still exists in the Bahuda-Vamsadhara basin around Mahendragiri where a peculiar sect of Brahmans set out once a year to sell silk cloths. Even the rich Brahmans of this sect had to sell one piece of Silk cloth every year.

This is the reminiscent of the trade of Kalinga with South East Asian countries.

There is a tradition still believed in Funan or Cambodia that a Naga Princess got married to Kaundinya Brahmin and the country of Cambodia came into existence. It is also known from inscriptional sources that Huen-tien (Kaundinya) introduced the Indian culture in Funan. It is a fact that the Odia seafarers at some point of time began to trade with South East Asian island countries around post Common Era as known from archaeological sources, particularly from the pottery remains. Initially, they hugged the coast till the Isthmus of Kra. This is the thin strip of land, now part of Thailand, from which the Malaya peninsula hangs. Goods were taken overland to the Gulf of Thailand from where they were loaded again on ships for ports of Cambodia and southern Vietnam. This explains why India's eastern coast established links with faraway Vietnam before the Indonesian islands of Java and Bali that may appear closer on a map. OcEo, in Vietnam's Mekong delta, seems to have become a major hub. From there, merchandise would be traded up the coast to China.

It is in the Mekong delta that we witness the establishment of the first Indianized kingdom of South East Asia around first century BCE/CE. The Chinese called it the kingdom of Funan. There is an interesting legend about how this kingdom was founded. It is said that an Indian merchant ship was sailing through the region when it was attacked by pirates led by Soma, daughter of the local Naga chieftain. The Indian fought back and fended off the attackers led by a handsome young Brahmin called Kaundinya. It appears that Princess Soma had been impressed by Kaundinya's bravery and had fallen in love and got married. The union is said to have founded a

lineage that ruled Funan for many generations. Whether this legend has some historical base or not is difficult to answer, but slightly different versions of the story have been repeated in inscriptions by both the Chams of Vietnam and the Khmers of Cambodia. It is also repeated in contemporary Chinese records. Further, we see matrilineal genealogies would be given a great deal of importance over 1500 years that these Indianized kingdoms flourished in this part of the World.

This myth may be the reason, why the serpent (*naga*) became such an important royal symbol in Khmer iconography. More than thousand years later, the mystical union between the king and a 'serpent' princess remained an important part of the court ceremonials at Angkor. So now who was Kaundinya? It is certain that he was a Brahmin from India. While Kaundinya is not a common first name, it is the name of a *gotra* (i.e., male lineage) of Brahmin who still live along the Tamil-Andhra-Odisha coastline.

According to the Chinese sources, the kingdom of Funan was established by Brahmana Kaundinya-I, at the close of 1<sup>st</sup> century CE and the capital was at Vyadhapura and the process of Indianisation began. It was further accelerated with the arrival of another Brahmana Kaundinya-II in later part of 4<sup>th</sup> century CE. One of the greatest Kings of Funan was Jayavarman II (790 CE) who conquered, first Vyadhapura (south-east of Cambodia) and then Sambhapura (present day Sambor) and finally Aninditapura and established his power. On the basis of these evidences, one can infer that the Kaundinya Brahmanas might have migrated through the Port of Palur which was referred to by Ptolemy (2<sup>nd</sup> century CE). Palur, Baruva and Kalingapattanam were three ports in between the River Rusikulya and Vamsadhara

and Mount Mahendra were the ideal place to undertake sea voyage which the people of Kalinga adopted. The firm foundation of Kalinga or Ancient Odishan maritime trade could be glimpsed even now from the archaeological remains available at Palur around Chilika, Baruva around Nagavali river, Salihundam-Kalingapattanam-Mukhalingam area on the river Vamsadhara on either side of the mount Mahendra in Odisha –Andhra border.

The name of the Mahendra mountain appears in the history of Funan in two occasions. The history of southern Ch'I states that during the reign of Jayavarmana (5<sup>th</sup> century CE.), the custom of this country was to worship the God Mahesvara (Shiva) who continually descends on mount Mo-tan. The mountain Mo-tan could be another name of Mahendra mountain of Odisha which was also considered as the abode of Shiva since the Eastern Gangas of Kalinga were worshipping Shiva Gokarnasvami as their tutelary deity on Mahendra mountain. According to a Chinese tradition, there were more than 1,000 Brahmanas in Tuan Suan, a principality under Funan. The Kambuja records mention a number of Brahmanas who came from India. The establishment of tutelary god Gokarnasvamin on Mahendraparvata in Kalinga and Mahesvara in Funan belonged to same time.

This led to an important assumption that as Funan was Indianised by the traders and merchants from the eastern coast of India, the migrants, with the passage of time named a local mountain of Funan as Mahendraparvata after the Mahendraparvata of Odisha which had God Mahesvara (Gokarnesvara) on it. The imitation and adoption was obvious on the part of migrant Indians in the process of spread and introduction of Indian culture there as elsewhere.

This is further corroborated by Jayavarman II (9<sup>th</sup> century CE) of Funan or Cambodia who went to reign at ‘Mahendraparvata’ and installed a miraculous Siva lingam there as *devaraja* or king of gods (which is god Siva or Mahesvara himself in c. 802 CE) with the help of a Brahman named Hiranyadama whom he invited from Janapada (probably in India). Jayavarman II is most often cited in the inscription as “the king who established his residence on the summit of Mount Mahendra”. This Mahendraparvata (i.e. Mount Mahendra) has been identified with Phnom Kulen, the sandstone plateau that dominates the northern part of the Angkor plain. As Jayavarman II went to Mahendra Parvata to reign and established his residence there, it appears that mount Mahendra which was considered as *Kula Parvata* (PhnomKulen) and used as the abode of *devaraja* was already there in Funan (Cambodia) before the reign of Jayavarman II. So, this could have been the mount Mo-tan of the Chinese record of the fifth century CE. This indicates that the Kaundinyas of Funan were not only ardent Saivites but also had intimate association with the Mahendraparvata of Kalinga and there was close contact between Kalinga on the eastern sea coast of India and Funan.

On the basis of the above discussion, it is presumed that the Kaundinya Brahmanas might have migrated from Mahendra mountain region of Kalinga. The main reason for the belief that the homeland of Kaundinya Brahmins of Funan could be Mahendraparvata of Kalinga arises from the fact that the name of Mahendra Mountain appears in the history of Funan on two important occasions as discussed. It is an accepted fact that Kalinga played an important role in the Indianization of Southeast Asia during the early centuries CE.

Long back, scholars opined that the Andhra-Kalinga country on the east coast of the Deccan was the home land of many, if not all of the migrations which resulted in the establishment of Hindu-Buddhist kingdoms in the Archipelago.

The question comes why they named a mountain of Funan as Mahendraparvata and not after any other Indian mountain names which logically implies that Kaundinya and early emigrants most probably went from Kalinga region, especially from the Mahendraparvata region. The Ragolu Copper Plate Charter issued from the victorious Singupura, one of the chief cities of the kingdom of Matharas (350 to 500 CE), identified with modern Singapuram situated between Srikakulam and Narasnapeta towns not far from Mahendragiri. The Copper Plate was issued by Nandaprabhanjanavarman, the lord of the whole of Kalinga or Pitrbhakta king record the grant of a piece of homestead land in favor of the *Brahmacharin* Nandisarman of Kaundinya *gotra*. Another grant Pedda-Dugam Copper Plate Charter issued from Simhapura of Maharaja Satrudamana deva records the grant of villages namely Duha-grama, Vasu-vatak and Go-vataka situated within the *agrahara* called Vardhamana in Giri-Kalinga in favour of two Brahmanas belonging to the Kaundinya gotra and Taittiriya (sakha of Yajurveda) who were residents of Pattuvagrama. Here, both Giri-Kalinga and Kaundinya denote again the area around Mahendragiri.

### Historical Context

Epigraphic records are replete with references to Mahendra mountain from 2<sup>nd</sup> century CE to 13<sup>th</sup> century CE as how the mountain Mahendragiri held high esteem by different dynastic rulers of Kalinga or ancient Odisha. The importance lies that great conquerors

like Gautamaputra Satkarni, Yosdharman and Rajendra Chola claimed supremacy over this mountain. To begin with Nasik cave inscription of 2<sup>nd</sup> century CE which describes the conquests and achievements of Gautama putra-Satakarni who was the Lord of Mahendra region along with other areas. This is also known from Satavahana antiquities recovered from nearby Salihundam, Buddhist site on Vamsadhara. It is already established that Andhra Satavahana influence was there in Odisha as known from recent excavations at Langudi, Lalitgiri, Radhanagar and Sisupalgarh in the last two decades. K.C. Panigrahi observes long-back that Andhra Satavahana coins have been discovered at Sisupalgarh, Salihundam, Ramatirtham, Sangharama. The Yaksha images of Sanchi type has already been found on the sculptures of Udayagiri. Since Sanchi was under the Andhra Satavahana rule during the rule of Satakarni II, it may be adhered that there was a period of Andhra Satavahana contact with Odisha. Since the mount Mahendra situated in Kalinga has found place in the list of the mountains of which Gautamaputra Satakarni is stated to have been Lord, the importance of the mountain has to be accepted significantly for the cultural history of Odisha and from 2<sup>nd</sup> century onwards, the mountain stands to be important from several points of view such as Kalingan identity, a milestone for trade route as well as cultural linkage to south etc.

The Allahabad Pillar inscription (*Prasasti*) records that during southern campaigns, Samudragupta conquered some principalities of Odisha and defeated principalities, located mostly in the Kosala and Kalinga region. In this campaign Samudragupta defeated Vyaghraraja of Mahakantara, and Mantaraja of Korala (principalities in modern Koraput district) and further south Kottura a village in

*Mahendrabhoga-visaya* and further Mahendragiri of Pistapura, Damana of Erandapalli, and Kuvera of Devarashtra. All these principalities of Kalinga are now identified in Srikakulam and Vishakhapatnam District of Andhra Pradesh. The political condition of this part of Odisha (then known south Kalinga) was divided into certain pretty principalities such as Mahendra, Kottura, Erandapalli all were in the region around Vamsadhara river. Since Mahendragiri is a important geographical landmark all the *prasasti* writers might have referred the hill as a region.

Next, following 4<sup>th</sup>-5<sup>th</sup> centuries, the region was a great importance during the rule of Matharas (350-500 CE) whose territory extended all around the mountain as known from Devalpetagrants. Under Umavarmana of Mathara dynasty the newly acquired area was formed a *visaya*. Simhapura was their capital identified with the modern Singhapuram near Narasannapeta of Srikakulam district. However, it is known from their records the name of five such capitals situated at Siripura, Sunagara, Vardhamanapura, Singhapura and Pisthapura (Panigrahi, 1981) all are in Ganjam, Gajpati (Odisha), Srikakulam and Vaizagpatnam (Andhra) districts. As known from copper plate grants these were cities or *nagaras* and Mahendra *bhoga* - at the foot hill of Mahendra mountain constitute important principalities under Matharas. At least five copper plate charters are known to have issued from these places by Mathara kings. In fact, the kingdom was extended from Mahendra mountain to Godavari. (The dynasty appears to have put to an end by the Vishnukundins of the south and Gangas of Svetaka in about 6<sup>th</sup> century, perhaps due to the invasion of Harisena of Vakataka dynasty –one of the builder of Ajanta. (Ajanta Inscriptions Hyderabad Series). For some time

Svetaka Gangas were ruling over the principalities around Chikiti region adjoining to Mahendragiri mountain in Ganjam district. However, the history of Matharas are not yet explored and recorded systematically. In the mean while, a Vighraha General named Prithvivighraha had established a kingdom consisting of northern Kalinga and a portion of south Kosala. This kingdom is described as *Kalinga-rastra* in the Sumandala plate of Dharmaraja (570 CE) who was a feudatory chief of Prthvivighraha and was ruling over Khalikote region of Ganjam district. (E.I.XXVIII.)

Hastivarmana (577 CE), the third known Ganga ruler of Trikalina, wrested away north Kalinga from Vighrahas and conquered south Kalinga from Prithivi-maharaja of Pistapura and thus founded the Ganga kingdom of Kalinga. He built the new capital of Kalinganagara on the bank of the Vamsadhara and assumed the title of *Sakala-Kalingadhipati*. Hastivarmana, in fact was considered to be the real founder of Ganga-kingdom of Kalinga. The Early Gangas or Eastern Gangas established their capital at Kalinganagara identified with modern Mukhalingam in Srikakulam district only 30 Kms from Paralakhemundi and around 60 kms from Mahendragiri. Scholars also opine that the Gangas had a secondary capital at Dantapura identified with Dantapurakota near Kotavalsa (The same site of ancient capital of Kalinga), again on the bank of Vamsadhara. The region of Gangas was around the present Srikakulam-Gajpati district, otherwise known as the Eastern Gangas or Early Gangas and ruled from 496 CE to the middle of 11<sup>th</sup> century CE. The Chicacole plates of Indravarmana (Ganga Era 146), states that “hail from the victorious city of Kalinganagara which is the ornament of all the land of Kalinga that is

embraced by the fingers of the waves of the water of the ocean, the Maharaj Sri Indravarmana, who has had the stains of the kali age removed by unceasing obeisance to Gokarnasvami, the sole architect for the formation of the universe, who has full-moon for (his) crest-jewel, (and) who is clothed with the coils of great serpents, (and) who dwells on the summit of the mountain Mahendra” and goes on narrating kings personal eulogy. It seems that Mahendragiri had already got its due importance in the cultural life of Kalinga people from the days of Eastern Gangas. As known from the archaeological and epigraphical sources, Mahendragiri is adorned with the Gokarnesvara (Kunti Temple), Yudhistira, and Bhima temple built by these early Gangas around 7<sup>th</sup> century CE. The most famous of these temples is Kunti or Gokarnesvara temple. It is one of the earliest temples of Odisha which is assigned to 7<sup>th</sup> century CE. However, there are divergent views on the date of these temples since the original form is altered now.

After the accession of Anantavarmana Vajrahastadeva in 1038 CE, the Gangas of Kalinga rose up to follow a policy of aggressive imperialism followed by Chodagangadeva (1077 to 1147 CE), the grandson of Vajrahastadeva V, the Ganga empire extended from the mouth of the Godavari to the Ganges. They also shifted their capital from Kalinganagara (Mukhalingam) to Avinava Varanasi Cuttack or Choudwar Cuttack.

Almost contemporary to the Eastern Gangas, the Sailodbhavas of Kangoda were ruling from middle of 6<sup>th</sup> century up to 736 CE and their area is around Chilika in between Mahendragiri and Bhubaneswar. Their capital was at Bankadagada and Niladriprasad which are traced with palace ruins and temples in the modern

Banapur area of Khurda district. The art and architecture with full form is known from a number of sculptural and architectural remains found at Bankada, 30 kms from modern Banapur. The cradle land of Sailodbhavas of Kangoda was mount Mahendra. As known from epigraphic records Kangoda was bounded by Chilika lake and the Bay of Bengal on the east, Mahendra mountain in south which was included in Kalinga territory in larger extent. Hiuen Tsang refers Kong-u-t'o or Kongoda as a hilly country, bordering on a bay of sea. It is accepted that Pulindasena, the progenitor of the Sailodbhava family, was the leader of the aboriginal Pulindas of mountain Mahendra. Pulindas were the powerful tribal people residing in the Mahendra region of Kalinga which was the gate way to south India. The two expressions in Sailodbhava records "*Kulagiri Ksto Mahendrah Ksitu*" and "*Kshata Kalinga jantasu Pulindasena*", undoubtedly indicate that the original home of the Sailodbhava family was 'Mahendragiri'.

The Buguda plates of Madhavavarman records that Pulindasena, a leader of the Kalinga-Janata, worshipped the god Swayambhu on top of this mountain where he received a boon from Brahma that a stalwart youth would come out of a rock after it had been split. He was called Sailodbhava after whom the family was named. Further, it is known from the preamble of Sailodbhava records that Pulindasena worshipped Lord Swayambhu who granted his wish and created apparently out of pieces of rock the prince Sailodbhava, who thus became the famous as the founder of the Sailodbhava line of Kings. However, there are number of stories and legends associated with Pulindasena and origin of Sailodbhava from the rocky region of Mahendragiri. Both Early Gangas of Kalinga and Sailodbhavas of Kangoda were devout Saivas

and both point out Mahendragiri as their seat of adoration. When the Bhaumkara king Subhakar I after occupying Kangoda marched towards Kalinga, the Gangas, the friend of Sailodbhavas, made a strong defense by resisting Bhuamas and mount Mahendra remained as the border of Kalinga. Here, again it is postulated by scholars like S.C.Chadra that the Sailodbhavas being hard pressed between Bhuamas of Utkala and Gangas of Kalinga migrated to Malaya Archipelago. (OHRJ, Vol.III, No.2). It may have some historical truth as the Sailendras of Java and Sailodbhavas have many similarities and the name mount Mahendra also occurred in the countries of Malaya Archipelago.

The explicit weakness of the Somavamsi king Karnadeva and his kingdom encouraged the neighboring kings to capture it. Kalinga was then under a very powerful ruler named Chodagangadeva invaded Utkala in 1110 CE, but the Mukhalingam inscription refers that Chodaganga succeeded in occupying Utkala by defeating the Somavamsi king before 1108 CE. Chodagangadeva annexed Utkala permanently to the Ganga kingdom and transferred his capital from Kalinganagara (Mukhalingam) to the Somavamsi capital Varanasi Cuttack around 1114 CE.

Thus, the Gangas of Kalinga, a branch of the Ganga dynasty, had ruled Odisha continuously for a long period of nine and half centuries from 498 to 1435CE. They are designated as Eastern Gangas to distinguish themselves from the Western Gangas of Mysore. The whole period of their reign as discussed can be divided into two historical phases. The first phase i.e, from CE 498 to 1038 CE ruled from Kalinganagar of Kalinga principality as early Gangas and the second phase which extends from CE 1038 to

1434 CE ruled from Varanasi Cuttack uniting whole of Kalinga, Utkala, Odra, i.e., Odisha and known under the name of imperial Gangas. During the imperial Gangas, Vajrahasta-V, the first imperial ruler was a *paramamahesvara* and a great devotee of Lord Gokarnesvara.

The Ganga dynasty of Kalinga and the Sailodbhava kings of Kangoda had regarded great respect to the mountain as *Kulagiri*. Even the imperial Gangas shifted their capital from Kalinganagara on the bank of the river Vamsadhara to the central Odishan capital Varanasi Kataka (modern Choudwar-Kataka) but still they offer their devotion and regarded Gokarnesvara as their family deity at least at the beginning. The Gangas, on the other hand, most likely followed the earlier revered and established tradition of Gokarnesvara on the mountain as their family deity. Two inscriptions of 12<sup>th</sup> century CE are found engraved in Kunti temple referring God Gokarnesvara. The first one is engraved on a slab lying to the right of the entrance to the Kunti shrine on the Mahendra mountain having sixteen lines of writing in Sanskrit and Telugu in prose of about 12<sup>th</sup> century CE (Saka year 1045). It records the gift of a perpetual lamp in favour of the god Mahendrasvara (i.e. Siva Gokarnesvara) by Laksmidharaya, son of Devasramana and grandson of Narayana.

The second inscription is engraved on a slab found on the left of the entrance to the Gokarnesvara (Kunti) temple having altogether nineteen lines in Telugu of 12<sup>th</sup> century CE. (Saka year 1055). The inscription records the gift of a perpetual lamp in favour of the god Gokarnesvara (Siva), on Mahendragiri on the occasion of Vyatipata-yoga by Srikarana Bhimanatha, for the increase of religious merit of Medapotu Sdyya of Arsavelli, during the victorious sixtieth *srahi* of

Anantavarmana Chodagangadeva (of the Ganga dynasty). For the burning of the gift lamp, he deposited 5 *madas* under the custody of the *kampus* (mercantile community) for regular supply of clarified butter to the temple.

The Yudhisthira temple inscription on the Mahendra Mountain having six lines in Telugu of about 12<sup>th</sup> century CE, but not in a good state of preservation. Below the inscription, there is the emblem of Chola dynasty, representing the figure of two fishes with a seated tiger in front of them. The inscription records the eulogy of Rajendra Chola of the Chola dynasty and apparently states the installation of a victory pillar (*vijayastambha*) on the top of the Mahendra mountain. It seems Mahendra region was remained for some time under the Cholas but the Ganga King Anantavarman Chodagangadeva recovered the lost territories around 1090 CE. Mahendraparvata is still played an important in the Odishan Culture even under Suryavamsis and further under Moughals after 1576 CE.

#### Archaeological Remains:

The area on an undulating flat land and hilltops ups and down was chosen a place for temple construction on the middle peak of the mountain. As of now, we see three standing temples at distance from each other forming a triangle. But there are other ruins and remains as huge stone blocks are seen gathered perhaps belong to some more temple edifices of the past. A number of scholars in recent times tried to put all the archaeological remains of the hill mostly the temples around 6<sup>th</sup>-7<sup>th</sup> century. The scholars discussed on this issue were K.C. Panigrahi, K.S. Behera and B.K. Ratha and others were given a passing reference. Even, a popular ancient architectural text *Silpapraksha* having three copies of the manuscript in Sanskrit script are

reported from Puri but was transcribed in the village Sobanpura on the banks of the river Rusikulya. The second copy was (Manuscript-2) traced from the town Manjusa in Andhra and was written in the same village, described as “surrounded by the Mahendra mountains”. Manuscript 3 was found from in Srikakulam in Andhra and was written on the banks of the river Musali in the Mahendra mountain area.

As discussed, in many of the Eastern Ganga plates begin with invoking ‘Mahendra *pratisthita* Gokarnaswami’, or the deity at the summit of Mahendra mountain, but not a single record refers a temple is constructed for him or donation made to him. However, temples were constructed being earliest one dated to 7<sup>th</sup> century CE may be assigned to Eastern Gangas or Sailodbhavas. However, none of the scholars dated the temples but arrived at the conclusion by taking together the architectural styles. In our recent study of the standing temples and other ruins, we accept the dates of the previous scholars earliest being assigned to Sailodbhava period as that of Satruganesvara group of temple of Bhubaneswar. As has been discussed Mahendragiri was the Kulagiri of Sailodbhavas and Lord Gokarneswara was the *Istadevata* of the Eastern Gangas of Kalinganagar. They must have built *devayatana* for the God. Although we are getting inscriptions from the temples but all are dated to late period of 12<sup>th</sup> and 13<sup>th</sup> century of the imperial Gangas. In Odishan context, we get reference of *devayatana* from 1<sup>st</sup> century CE and standing temples from 6<sup>th</sup> century CE.

Now, there are three temples standing on the top of Mahendragiri mountain although ruins of some other edifices are still scattered around. Saraladasa, in his *Odia Mahabharata* mentions that the temples were built by Pandava brothers

and their mother Kunti who visited the mountain during the exile. These temples named after Bhima, Yudhisthira and Kunti.

### Bhima Temple

Let us start with the smallest and oldest one at the highest peak locally known as Kubjagiri at Mahendragiri. This temple is located about a km away further highest peak from Yudhisthira temple located on flat on the lower peak. One has to climb the narrow serpentine pathway to reach at the temple; of course, the temple is visible from Yudhisthira temple area. The Bhima temple as named itself, there is no historical record to support it, but well-known to all by this name, is with a height of 7 mtrs. approximate and with 4 x 4 mtrs. square on plan. The whole temple was constructed with a good number of huge stone blocks. All together there are about 26 stone blocks used for the temple. The stone blocks, as seen around 3 x 3 mtrs and 1.40 mtrs. in length, width and height. The stones are placed one on another forming a *Rekha* temple of one chamber or only *deula* and placed in proper plumb. The circular *beki* is marked followed by usual *amalaka* dressed in single stone. An opening of 1.2 mtrs in height is seen facing south. The inner *garbhagriha* is around 1.5 x 1.5 mtrs. The present temple seems to be reconstructed on the older one with some alteration and addition of *amalaka sila* placed on its flat roof. Some scholars have studied closely and opined that originally it was a flat-roofed structure walled by eight big pieces of stones. K.C. Panigrahi who was a pioneer in drawing the chronology of Odishan temples states that the Bhima temple found on the top of Mahendra mountain is devoid of sculptures, but is not a *sikhara* temple. It is a flat roofed stone structure, but with no circumambulatory covered path to be generally seen in the early Gupta

temples. Some scholars assigned its construction to the Mathara King Uma Varmana (360-395 CE) with generally comes under Gupta period. as the form of temple evolved at Sanchi and Tigwa.

The whole temple is just a replica of Kalinga School of Architecture at its beginning. R.D. Banerjee referred to Kalinga style. S.N. Rajguru and other scholars accepted it as the earliest specimen of temple architecture, generally dated to 5<sup>th</sup>-6<sup>th</sup> century (Gupta period) but in Odishan context either Eastern Gangas or Sailodbhavas. It is more akin to Sailodbhava period.

There some similar temples exist at different regions of India as is found at Kud in Jabalpur district and another at Bilaspur. Some more in Bijapur district. Here, Bhima temple as tradition goes was constructed by Bhimasura, the demon Bhima and his demonic race Bhima Savaras, who are all still existing in Mahendra region as a branch of Savara community.

### Yudhistira Temple

Next down on the flat land of the peak of Mahendra mountain stands a temple called Yudhistira as known widely and dedicated to Siva. The temple is one single *deula* of *tri-ratha* type rises abruptly from the ground and has a tapering projection. The *bada* portion is straight and is adorned with an *amalaka* with an *ayudha*. The temple has no deities and a frontal opening is there. The opening faces to south and approximately six feet in height. Four *chaitya* arches adorn from four sides of the *sikhara*. There is a boundary wall made of huge rectangular pieces of stone. The temple is fully restored and conserved. The temple may be compared with Satruganesvara group of temples of

Bhubaneswar dated to last part of 6<sup>th</sup> century or early part of 7<sup>th</sup> century CE. This temple is also a proto type of Somesvara and Madhukesvara temples of Kalinganagar or Mukhalingam but without artistic representation. A number of architectural pieces and stone blocks are found scattered around the temple. This temple perhaps was re-built from the original shattered one. The front door lintel contains an inscription of the Chola king Rajendra Chola.

### Gokarnesvara Temple

This temple is situated at one end of the flat ground further towards east down after Yudhistira temple. This temple is popularly known as Kunti and dedicated to Gokarnesvara Siva as has been referred to in numerous copper plate charters. The temple is a single chambered shrine having characteristics of a *sikhara* temple or *Rekha Deul* (curvilinear tower) built in Kalingan style. The approximate height of the temple is 30 feet and does not have a plinth. The temple is facing west and the side niches contain figures of *Parsva-devatas* (side deities). It has a square sanctum enshrining a *linga* devoid of porch, narrow doorway, walls without niches, incipient mouldings, squat *sikhara* formed by one small flat roof over a big flat roof with an asymmetrical fluted *amalaka* are its characteristic placing it in period of transition from Gupta to Post-Gupta period. The Ganesha and Karttikeya figures are well preserved, but the Parvati figure in north façade is badly mutilated. Navagraha figures are seen in the lintel over the front door. The temple is classified under *Pancha-ratha* type of Kalingan architecture. However, the temple has been repaired thoroughly with lime and mortar. A small niche flat roofed chamber (temple) in front of temple is seen which housed some images and the door jamb contain inscriptions. Nandi and

Garuda images are seen in front of the temple. Scholars dated this temple to 9<sup>th</sup>-10<sup>th</sup> century CE on the basis of the architectural and sculptural features and further two inscriptions of 12<sup>th</sup> century are found one on a slab to the right of the entrance and the other on the left of the temple. Even some scholars consider this temple as the oldest standing temple in Odisha. K.C. Panigrahi remarks that the shrine of Gokarnesvara is very ancient and is frequently mentioned in the copper plate records of the Ganga kings of Svetaka dating back to 5<sup>th</sup> century CE.

### Conclusion

No temple can stand alone. The rituals or temple complex, all part of a socio-religious matrix, connecting people in different geographical region in a series of complex symbolic networks. The temple is a monument of manifestation, node between the flux of man's world and eternity, his doorway to divine realization as well as window through which the formless eternal divine force of Hinduism is made visible and approachable as images in this world. This is the symbolic representation of the divine cosmos, recreating in three dimensional form the supernatural worlds inhabited by the gods and spirits. Here mention may be made that why these temples were built in such a remote and hilly terrain, the answer may be as H. Kulke remarks that the Hindu *raja* (Eastern Gangas) appropriated the local cults by donating the deities like Stambheswari, Maninageswari, Gokarnesvara, etc. and adopted these tutelary deities. This integration was completed by the Gangas who unified whole Odisha through Jagannath cult. Perhaps this integration was started from very beginning of their rule from 6<sup>th</sup>-7<sup>th</sup> century itself and that of Gokarnesvara of Mahendragiri. From 2<sup>nd</sup> century to 5<sup>th</sup> century CE, the region was well known

among the great emperors which must have more evidences in Odisha too but not yet recovered which need a through exploration and documentation.

Mahendragiri stands in a strategic location, very close to Sea and the ancient ports such as Palur, Baruva and Kalingapatnam. This is why it is on a trade route and connecting to all regions of north, south and hinterland which was very well known from Samudragupta's march to South India and building of a strong capital city Kalinganagar near Mukhalingam by the Early Gangas. This is also reflected from the Chola inscription where Rajendra Chola fixed an inscription as well as a *vijayastamba* at Mahendragiri.

The South East Asian connection and the tradition associated with Kaundinya Brahmana could also be seen as K.A. Nilakantha Sastri remarks the Andhra- Kalinga country on the east coast of the Deccan was the home land of many, if not all of the migrations which resulted in the establishment of Hindu-Buddhist kingdoms in the Archipelago. The story of this mountain narrates the history of Kalinga which we all should need to know and let the state should come forward to preserve both the tangible and intangible heritage of the mountain -what we have tried little bit to record for our research purpose. The site is best to use history as economic activity or what we may call applied history by way of promoting heritage tourism. In fact, Mahendragiri is a heaven for the trekkers, youths, art lovers, naturalists, historians and others who have some inclination for nature. Let us preserve, promote and publicize the strength of the site through tourism which may help the local to regenerate their economic activity by establishing an eco-heritage destination.

Applied history could be the best means to grow livelihood in the region.

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# Population Growth & Food Security Through Sustainable Agriculture

*Dr. Bibhuti Bhusan Mishra*

India is the most populous country in the world only next to China. The population of India at the mid of 2020 is estimated to reach 1,38,00,04,385 by the United Nations Department of Economic and Social affairs. Sharing only about 2.5% of the global land mass India supports as much as 17.7% of the world's population. It is quite obvious that population growth puts a continuous load on the natural resource base like land and forest resources resulting in continuous diversion of agricultural land towards non agricultural uses and depletion of forest areas. The paradox of increasing food demand on one hand and shrinking of the arable land resources on the other leaves a great challenge before the country to ensure food and nutritional security for the country's burgeoning population. It is estimated that the country's population will reach 1.4 billion by 2027 and 1.52 billion by 2030. By 2027 India is expected to be the most populous country in the world. Thus the food and nutritional security for the present as well as future populations is one of the greatest challenges before the country.

Keeping in view the population rise in only a decade from now, we need to have a workable strategic plan to bridge the gap between the agricultural production that we have already achieved and that we need to achieve in order to

keep pace with the population growth. For the expected 1.5 billion people in 2030, our country needs a sharp increase in food production. It is projected that production of rice alone has to be increased from the present 116 million tons to around 122 million tons, wheat from the present 102 million tons to 129 million tons, pulses from the present 23 million tons to 26 million tons and the total food grain production has to be enhanced from the present 285 million tons to 334 million tons. As both agriculture and environment are equally inevitable for the very existence of human race on the planet our focus has to be centered on sustainability in both agriculture and environment. In other words while it is imperative for us to enhance and maintain the agricultural productivity at a level capable enough to meet our current and future food demand, it is equally important to maintain the ecological balance.

Agriculture can be sustainable, if besides being able to maintain productivity at the expected level, it is resource conserving, socially supportive, commercially competitive and environmentally sound. Sustainability rests on the principle that we must meet the needs of the present without compromising the quality of the environment for the future generations to meet their own needs. In practice sustainable agriculture tries to find a

good balance between the food production and preservation of the environment through judicious use of farm inputs, management of the natural resource base and orientation of the production techniques such that it has minimum ecological implications. Sustainable agriculture focuses on all those aspects which contribute to a good production level on a long term basis while maintaining and restoring the ecological balance at a reasonably safe level. Integrated approaches to crop management, exploitation of the natural means of soil health management, natural means of pest suppression and integrated soil and water conservation practices are the important components of sustainable agriculture. Sustainable agriculture is resource conserving and therefore it conserves our natural resource base, protects and conserves biodiversity, reduces the risk of hazards that otherwise happens from excessive use of chemical inputs in the current input based intensive agriculture.

Indian agriculture has made a spectacular breakthrough in the food grain production as a result of green revolution that got initiated in mid sixties and took a good momentum in the later years. The country's food grain production has made a quantum jump from 82 million tons in 1961 to as much as 252 million tons now. Similarly production of rice which is the staple food of majority of country's population has increased from 32 million tons to 116 million tons in the corresponding period. Such a remarkable increase in crop production has been largely possible due to intensification of agriculture that implies maximizing productivity with increased use of scientific resources and technology. It has been possible with the widespread use of high yielding varieties, quality seeds, increased use of chemical fertilizers and pesticides, farm mechanization,

increased exploitation of surface and ground water resources and adoption of scientific methods of cultivation.

Despite the fact that intensive agriculture has made a remarkable change in the agricultural scenario of our country, it is a harsh reality that it has unfortunately brought in several environmental problems through over exploitation of natural resources like soil, water, forest, atmosphere and the genetic base which put together has given rise 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 native plant species are among glaring problems which necessitate sustainability in agriculture to be brought into sharper focus. Sustainable agriculture focuses on economically viable system that reduces the use of off-farm inputs such as chemical fertilizers and pesticides and relies more on on-farm resources. To qualify sustainability, agriculture needs to be technically feasible, economically viable, socially acceptable and environmentally sound.

Sustainable agriculture can broadly be achieved through efficient management of natural resource base and integrated approach to crop management. Land is the most important resource base to produce crops. Judicious land management therefore plays a very important role to make it well productive. Out of a total geographical area of 329 million hectares of the country approximately 144 million hectares are affected due to soil erosion of which about 40 million hectares have already become degraded. Efficient land resource management with location specific and demand driven soil conservation and land amelioration measures on watershed basis

need adequate emphasis to address to this problem.

Water is another basic requisite for crop production. About 38% of the gross cropped area of the country is irrigated and the rest is monsoon dependent. Crop failure due to uncertain, untimely and erratic rainfall is a common occurrence in many monsoon dependent areas of our country. On the other hand India is among few countries which receive a good amount of rainfall. Considering the average precipitation of 1250 mm over 329 m ha geographical area, the total water resource of India from rainfall comes to 400 million ha m of which we are able to tap only about 17 million ha m in the reservoirs and tanks. Unfortunately many of our irrigation projects also suffer from considerable loss of irrigation water due to poor maintenance. If the precious rainwater can be tapped through efficiently designed water harvesting structures, check dams on natural streams, recharge wells, percolation tanks etc irrigation can be extended to greater area for an assured crop production. Moreover, enhancement of precision irrigation including sprinkler and drip irrigation system can bring more areas under irrigation in the event of limited availability of water.

Scientific investigations are underway to develop cultivars having maximum production potential through conventional breeding techniques as well as genetic engineering. Inevitability of higher yield potential of the varieties is well evident to maximize the crop productivity under varied agro climatic conditions. It is therefore important that high yield traits should also be coupled with in built tolerance to the biotic and abiotic stresses in order to safeguard the crops under the stressful situations.

There has been a phenomenal increase in pesticides use in agriculture over the past few decades. While the benefits rendered by the pesticides to protect crops from the ravages of pests are unquestionable, their indiscriminate use poses serious threat to the environment and health of living beings. It gives rise to grave consequences like residual toxicity in food chain, environmental pollution, development of resistance in target pests and pest resurgence causing minor pests to emerge as major ones. To overcome all these problems integrated pest management is now gaining increased importance and acceptance all over the world. Integrated pest management is of great significance in the sustainability perspectives of agriculture as it makes use of an ideal combination of physical, cultural and biological methods to contain pest damage with minimum ecological implications. Of course it does not completely do away with pesticides and rather relies on a need based use of pesticides looking to the economic threshold level. IPM takes the utmost advantage of the natural mechanism of pest suppression. Modification of the crop environment to make it unfavourable to the pest, use of cultivars with inbuilt resistance, conservation of predators and parasites and a judicious use of preferably safer pesticides constitute the major components of integrated pest management. Natural pesticides of plant origin are also gaining increased emphasis now days not only in India but across the globe. More than 2000 plant species available in nature have been found to produce metabolites which have insecticidal, ovicidal, repellent and antifeedant properties that can effectively be used against a wide range of crop pests. Such natural pesticides fit well to the IPM. Unlike chemical pesticides they are usually not detrimental to the ecosystem.

Biological control is another important component of ecofriendly pest management strategy. In the biological control the pest population is kept under suppression by employing natural enemies like predators, parasites and antagonist fungi, bacteria and viruses through the mechanism of predation, parasitism, pathogenesis and competition as a result of which the pest population is contained below a level causing economic injury to the crops. Eventually it also reduces the necessity of chemical pesticides thereby reducing the pesticide load on the environment.

Crop production to a large extent depends on soil health. Ideal soil health management requires a combined use of all possible methods and available farm resources to improve the soil physical conditions. It encompasses organic manures including farm yard manures, nutrient enriched composts, vermicompost, bio-fertilizer and green manures together with a judicious and need based use of chemical fertilizers instead of sole use of the later. Bio-fertilizer not only offers an economic and environment friendly source of nutrient, moreover the nutrient so derived is less prone to losses than the chemical fertilizers. Similarly the legumes like soybean, kidney bean, green gram and gram etc used as green manures significantly enrich plant nutrients in the soil.

Atmosphere provides an inexhaustible source of nitrogen which can be harnessed through the process of biological nitrogen fixation. Biological nitrogen fixation, a natural means of biological mobilization of atmospheric nitrogen to a form which can be easily available to and utilized by the plants mediated by certain microorganisms also fits well to the sustainable agriculture.

So far in the knowledge of human being earth is the only planet in the universe endowed with an environment that supports life. Therefore in order to ensure sustenance of life on this planet the aesthetic qualities of the environment must be maintained. None of the human activities including agriculture should be detrimental to it. It is therefore the need of the hour to bring the sustainability of agriculture and environment into sharper focus to achieve the dual objective of ensuring food security for the present as well as future generations while maintaining the ecological balance at a reasonably safe level.

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## Celebration of Rastriya Ekta Diwas

*Dr. S. Kumar Swami*

National integration is also known as Rastriya Ekta and National integration day as Rastriya Ekta Diwas. It is a positive aspect to reduce the differences of socio-cultural and economic as well as inequalities among people of the country. It promotes to strengthen the unity among people of any group society, community and whole country to bring national unity a day. It is not a force by any authority however it is a request from people to make our country a developed country. It is possible only through the unity and harmony of the people. They should share their ideas, values and other issues to enhance their emotional bonds. People must feel and live the Unity within diversity and make our national identity a supreme power.

Generally speaking, the extent of diversity found in India tends to create the impression that it is not a country but a subcontinent. But this does not imply that unity or integration is impossible in such a situation. One finds distinct and different racial characteristics among the inhabitants of different parts of the country because differences of complexion, size, shape etc. are clearly indicative of the inhabitants as one moves from Punjab to Assam. If other examples are necessary, it can be seen that there are all kinds of complexions in this country. In the north complexion varies from darkly, whitish, dark, yellow to red even runs into mixtures of these

colours. Turning to languages one finds that the Indian constitution has granted recognition to Urdu, Bengali, Assamese, Odia, Punjabi, Gujarati, Marathi, Sindhi and numerous other languages in addition to Hindi. Differences exist not only at the level of language but also in respect of dress, religion, culture etc. Tribes of the North east, central districts and the south differ from each other in their modes of life, their social and in psychological characteristics etc.

But despite these differences of region, race, language, tribe etc, the existence of a national Unity cannot be questioned. One finds this inner unity or integration in all the people spread over the land limited by Himalayas on the one side and the Indian Ocean on the other, the Burma Hills in the east and Pakistan in the west. Their inner Unity is the basis of emotional integration. This inner unity is the basis of emotional integration. This inner integration or unity is the basis of Indian culture. In fact, the very name Bharat Varsha denotes not merely geographical boundaries but actually the ideal of a cultural unity. During the middle ages, India was always treated as one unit. That India is accepted as the mother by all Indians is only due to feeling of oneness and identity.

### **Efforts to bring integration**

It was this question of integration which inspired the central education ministry in 1961 to organize a committee for integration under the

chairmanship of Dr. Sampurnanand. All that is needed is that the younger generation should be educated in this direction through various kinds of programmes. Therefore the committee has given the following views.

- 1) There should be reorganization and reshaped the syllabi of colleges and Universities to accord with the needs of the nation.
- 2) Encouragement to Extracurricular activities which are important from the stand point of emotional integration.
- 3) Improvement of text Books of various subjects and also be amended.
- 4) There should be the improvements of concerning language and scripts at the University level. The study of Hindi and English literatures, should be encouraged so that integration is encouraged and divisive forces checked. The rights of the minorities should be protected in formulating a language policy.

In addition to the above suggestions, the committee made certain other suggestions. In school the students should be encouraged to discuss on this topic and asking the students to take an oath to improve emotional integration. At the same time to create a climate in which all people feel that they are members of one nation.

### **Suggestions for its improvement**

Above all, we must give importance to education which can improve our moral strength to feel oneness among us.

Education can be used in the following suggested ways for improving integration in the country.

- 1) There is necessity of development of an all India language.
- 2) A national educational plan should be devised so that the younger generation may be of brought up in an atmosphere of nationalistic fervour.

3) Many kinds of programmes can be devised for increasing national unity. All India competitions and meetings can be organized in various parts of the country to increase national unity.

4) There must be promotion of intercultural understanding to achieve liberality of attitudes to other cultures which is an essential precondition of national unity in a country.

5) It is desirable that national consciousness should first be stirred in the students. This can be done through the teachers.

6) Above all, governmental effort is essential for bringing success to all the projects outlined above because without official blessing, there is little that education can achieve.

### **Conclusion**

It is evident from the foregoing analysis of the measures for increasing natural integration that these measures must be both positive and negative. Adoption of all these measures would be a positive step. The negative step of destroying all obstacles in the way of emotional integration is no less important. For this the teachers, administrators and guardians will have to work collectively. Then alone the country will witness solid natural integration in spite of regional integration in spite of regional pluralism.

Hence Dr. Rudrakrishnan says- "National Integration is not a house which could be built by mortar and bricks. It is not in industrial plan too which could be discussed and implemented by experts. Integration, on the contrary, is a thought which must go into the heads of the people, it is the consciousness which must awaken the people at large.

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## If I say “Oxygen is an Odia Word” !!

*Aditya Kumar Panda*

Oxygen is an Odia word! Oh! What? One may think that the author has gone mad. The title would give you a hint about my hypothesis that is to identify a word as an Odia word. In other words, when I say something as this language word or that language word, what exactly I say and why, is something interesting to ponder. By reading the title, “Oxygen is an Odia word” with an exclamatory mark, one may be surprised; the linguists or the language speakers may give an unapproved look. Some scholars may reject it right away. The reason is obvious. Everyone knows that it is widely used in English and found in English. Etymologically, it is from the French *oxygene*, which was coined by the French chemist Antoine Laurent Lavoisier (from Greek *oxys*-means acid + French *gene*-means produces). I would not discuss about the discovery of ‘oxygen’, how Carl Wilhelm Scheele started the experiment and how Joseph Priestly did it and how Lavoisier mistakenly named it as oxygen. What has happened in case of this word is its practice as oxygen all over the world although what it means linguistically is not what it is in reality. It is a fact that this substance on earth is misnamed (American Heritage Dictionary, [ahdictionary.com](http://ahdictionary.com), 2017). The origin might be at fault, but what makes it to be accepted is its use over the years. What I have mentioned just now, could be considered as historical fact, but what I am going

to put forth could be a synchronic one. In many Indian languages, this word has been provided with an equivalent: *amlajaan/amlajaanaka*. In Odia, my mother-tongue, it is “*amlajaan*”- which is mostly used in the standard written media. But oxygen is used more in the spoken form of Odia. You go to a hospital in Odisha; you will get oxygen not *amlajaan*. In day-to-day activities, people talk about the need of oxygen for someone who is hospitalized. It is interesting to find that both the words (oxygen and *amlajaan*) are in use in Odia in their respective contexts. I have already hinted above that *amlajaan* is more used in Odia text books, but not colloquially more. The point is how to categorize a word, whether English or Odia or Tamil or Hindi or Arabic. Should we only ascribe to the prescriptive notions or we should go by the native speaker’s usage while categorizing a particular word? My question is simple. Do the common people think about category whether it is Odia or English, when they communicate in day-to-day life? They use words as those come to their minds. In this context, Nehru had rightly said in his speech that the ordinary man does not ask your opinion as to what he should call a bicycle. He calls it a bicycle and is done with it (Nehru, 1964). It is the linguists, language policy makers, scholars who distinguish between languages.

One could witness two facts occurring in the usage of *amlajaan* and oxygen in Odia. The use of the word *amlajaan* for oxygen has a short history of deliberate planning, whereas the use of oxygen in Odia is spontaneous (means it comes and gets used automatically-it is directly stored in the mental lexicon of Odia speakers)-means its use is not a planned one. Oxygen is used more in the context of medical treatment whereas *amlajaan* is used more in written media like text books. One is a matter of coinage, whereas the other is a borrowing, if one uses the technical jargons to attribute these words. Such usage indicates the following facts regarding language and translation:

- A. Language policy and planning influence language use to a certain degree.
- B. Language can be planned but cannot be checked.
- C. Multilingualism is in place.

One could say that the use of “*amlajaan*” is directed more by the purists-conformists whereas the other is by the non-purists-nonconformists. They advocate for each of these terms on their own reasons: the first one gives the reason to use and accept *amlajaan* as it is coined in Odia-they consider it to be Odia, although it is from Sanskrit; the latter goes for accepting the English term in Odia with a reason that one should borrow such words from English and as everyone understands oxygen in its context, it is fine to use such terms in Odia. These two stands are not only found in Odia but also in many Indian languages. ‘Oxygen is an Odia word’ could be supported more by the non-purists/non-conformists, but another interesting point is when a purist goes to a hospital he/she also does not ask for *amlajaan*, he/she goes for oxygen. I am using these two categories for the purpose of discussion only-not

to mean to distinguish them. Language policy (or planning) has been successful to a certain degree as one could witness the use of *amlajaan* in Odia, although it has not been able to restrict the use of the source word oxygen. So the question remains unanswered-how to categorize such word as belonging to this language or that. I would like to cite some examples of similar contexts. If one reads the latest version of Oxford English Dictionary, one will get Indian words like *ashram*, *avatar*, *raja* to be used as English words. At present, we can’t argue that these are only Sanskrit words-as they are placed in English dictionaries and are used by English speakers. With this principle, one could argue that Oxygen is found in English dictionary so it is an English word; then if one finds oxygen (ଅକ୍ସିଜେନ) in transliterated form in Odia dictionary, it should be considered as Odia word. Then if we think that an identity of a word should be determined by its use by the speakers; Odia speakers use the transliterated form of oxygen and they use it in spoken form too. My hypothesis qualifies here. Does the origin of a word determine the language in which the same should be categorized? It would be admitted by all that while using a word or searching the meaning of a word, one does not necessarily explore its origin. No doubt, determining origin is one of the ways of categorizing a word under a language. With this criterion, oxygen itself is not an English word as we have already seen in its etymology. In this discussion, I would like to emphasize on the use of the words-another determinant to categorize a word. Inclusion of many words from Indian languages in the Oxford English Dictionary (OED) is driven by the usage of those words only-not by origin. A word enters into a dictionary by its use. This is why OED gets updated regularly. With this principle, I could sensibly argue that oxygen is an Odia word. But this does not mean that its coined Odia equivalent

*amlajaan* is not an Odia word. As stated earlier, both are in use in Odia. Both can be logically explained as Odia words. This could be realized in many other Indian languages as well. Just a coinage does not become fruitful, if it is not put into practice. Why the word *amlajaan* has not entered to hospital yet ? This word has not been in use in hospital as the word oxygen is. There has not been such practice yet in the contexts of hospital in Odisha. The practice is, sometimes induced deliberately and sometimes it happens automatically. There are many Odia equivalents of the words related to medical field, which have been used in the hospitals across Odisha like Rakta for blood, haaDa for bone etc. Each of such words has its own history of usage. The Odia equivalents are there does not mean that the corresponding English words are not in use. Odia speakers do use the words such as blood, bone while speaking to one another.

Retaining the source term (technically known as borrowing) in a target language, and replacing it with a coined term are two possibilities- a translator can go for in his/her translation. If the degree of retention is more, some scholars don't consider it as a translation. To them, translation means replacement with the coined words in a target language. But some other scholars accept the retention in translation as they go by the use of the words. Both are the facts of target language and culture as Toury considers it (Toury, 1995:29). The degree of retention also determines the identity of a translation. If it is 100% retention, then should we consider it as a translation or not is a big question to ask. This is another debate one can do these days. This is the case in many English words used in Odia these days.

Interestingly, the word oxygen is transliterated in Odia as 'ଅକ୍ସିଜେନ' when it is written

in newspapers or books and all these are Odia letters: ଅକ୍ସିଜେନ. The process of transliteration is the one to assimilate what is foreign into a target language. It tries to familiarize the unfamiliar one in a familiar form with unfamiliar content. This process causes conditions in the target language to accept the transliterated form after a certain period of time as target language words. This is why there are many foreign words in Odia which have been in use in such a way that it looks as if they were originated in Odia.

My point here is not only to argue for "oxygen is an Odia word", but also analyze its space in Odia that indicates a global phenomenon which everyone of us is witnessing everyday. What am I hinting at ? The demarcating line between categories or among the elements of a category is becoming less visible. What is more prominent is crossing the boundary, delimiting a category, making language more open-ended and interrogating the singular identity. Oxygen can be categorized as French, English and Indian word. Its identity is no longer limited to a language only or to one region only. A singular identity brings in conflict. Nothing exists in the world that has a singular identity. Something may be considered as a composite whole but its identity is determined through its various elements or its functions. Identity of a word in a language could be decided either considering its history or its use. Oxygen is an Odia word because it is in use in Odia.

Use of both the words-*oxygen* and its Odia equivalent *amlajaan* in Odia, is a fact that counters the idea of homogeneity of a language and traditional notions of translation. I could say that the word oxygen (transliterated Odia form-ଅକ୍ସିଜେନ is one of the translations of the source English word 'oxygen'. Translation here is not from one to another but both exist together. Source

and target, both exist together. They are not the binaries—they don't oppose each other. Oxygen takes its own space of use in Odia and *amlajaan* has its own. Both may be considered as an equivalent of each other. But it is their usage which specifies their identity. This phenomenon defines translation as not only from one to another, but the existence of both together.

The source word of *amlajaan* is oxygen. It is the word oxygen that brought the target word *amlajaan* in Odia. *Amlajaan* is a word which was coined with the assumption that it will be used in Odia but the post-modern condition is as such that it has made the word oxygen also to be used in Odia. Such condition is problematizing the traditional notion of the identity of a language and translation. Post-modern condition is a site for the contesting ideas for tradition and modernity—it describes the confluence of many cultures and languages as the postcolonial critics view it.

Interestingly, there are Odia grammar books where one would get four divisions of Odia words: 1) *Deshaja*-words of native origin, 2) *Tatsama*-as used in Sanskrit, 3) *Tadbhava*-from Sanskrit but modified, 4) *Baideshika*-words from foreign languages. Oxygen comes under the fourth one. Though it is written in the traditional Odia grammar books that the words from foreign languages are *baideshika sabda*, these words don't receive equal treatment as Odia words. By the prescriptive principle inherent in our traditional Odia grammar, *baideshika* words like oxygen, computers etc. are Odia words. Here also my hypothesis qualifies.

No language in the world develops homogeneously. Languages contribute many words to one another. Demarcating a language by creating or compiling its corpus and naming all the words as the words of that particular language is political. Language-use falsifies such

demarcation and critically looks at the traditional notion of translation. Again I would cite Nehru who said in concluding a speech, "Broadly speaking, in our approach to language, we should be flexible, because the moment rigidity comes in, difficulties come in. If we adopt this flexible approach, we shall succeed both on the issue of language and on the basic question of synthesis between the old and the new" (Nehru, 1964). One could witness these two streams (rigidity and flexibility) confronting each other in Indian languages. This confrontation is more visible in the case of scientific and technical terms in Indian languages. Sometimes it is rigidity that prevails and some other times it is flexibility. The nature of language-use is as such that it considers rigidity and/or flexibility and/or both. The agents and the regulators of the language-use are responsible for determining the acceptance of the words.

So when you go to a hospital in Odisha, don't ask for *amlajaan*, you must ask for oxygen.

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## Maritime Culture and Heritage of Ancient Odisha

*Pradeep Kumar Panda*

From ancient times to the mid twentieth century, the size and structure of the land of Odia speaking people frequently varied owing to repeated changes in its polity. Nevertheless, its location on the coast of the Bay of Bengal and adventurous enterprise of the Odia's immensely contributed to the growth and development of the overseas trade and maritime activities of India in general and that of Odisha in particular. The paucity of suitable roads and the existence of a number of rivers and villages on their banks had further motivated, rather compelled the people of Odisha to take resort to the riverine routes for internal transport of goods and passengers as well. Consequently a number of port towns on the coast of the Bay of Bengal developed under the control and patronage of the people of Odisha. Various places of the land assumed greater importance owing to their direct or indirect association with the maritime activities. These places were noted for production and marketing of goods, and for their ship building and repairing industries. Their importance gradually decreased when their indulgence in maritime activities ceased for reasons what-so-ever, which are discussed separately. Sources of the history of ancient Odisha are not as vocal as expected, towards expressing the glorious maritime aspects of such places.

However, traces of evidence are found reflected in the works of literature like puranas and poems; novels and short stories of various traditional, contemporary and subsequent writers.

The present name 'Odisha' or Odisha has got its genesis in the Greek "Oretes" of Pliny and the Sanskrit 'Odras' of the Mahabharata. According to Dr. N.K.Sahu the two terms seem to have been suggested by the term 'Or' or 'Orua', meaning rice. In fact, the word 'Orua' prevalent in Odisha since early times seems to be the same as the Greek 'Oruza', meaning rice. The Oxford Dictionary states that 'Oruza' is a loan word in Greek derived from some Oriental source. The 'Oretes' or 'Or' (Odra) people may, therefore, mean either the 'rice eating' or the 'rice growing' people. The people of the geographical division between the river Ganges and the river Godavari identified themselves with the names like 'Kalinga', 'Odra Desa', 'Utkala', 'Urshin', 'Udravisau', 'Jajnagar-Udisha', 'Kosala', given by different authors of different places and times. Evidences of the extent of ancient Odisha are found in 'Matsya purana' and 'Kurma purana'. In the words of Sri Jagannath Patnaik, "the rich exuberance of the alluvial soil of the coastal region created by multiple streams and rivers with a long sea-base, washed by the swirling waters of the

Bay of Bengal as well as a vast hinterland and highlands with all the beauties and bounties of nature constituted Odisha in the hoary past. It was then stretched from the Ganges to the Godavari and from Amarkantak hills to the Bay of Bengal". The puranas describe Amarkantak hill as situated in the west of Kalinga. The political geography of this glorious land underwent remarkable changes in the subsequent periods of history depending upon the prevalent political conditions.

The whole of the coastal tract of Kalinga was under the suzerainty of Mahapadmananda, during 4th century B.C., when he excavated an aqueduct in the centre of that region, which was renovated and extended up to Kalinganagari by Kharavela, after three hundred years. This has been inferred by many historians like Dr. N.K.Sahu and others from the Hathigumpha Inscription of Kharavela. The fact that Mahapadmananda conquered Asmaka situated to the south west of Kalinga beyond the river Godavari, is an indirect evidence of the fact that at that time the territory of Kalinga was extended at least up to the river Godavari.

In 261 B.C. Kalinga became a province of the Mauryan Empire under Ashoka, Toshali (modern Dhauli in Puri District) being its capital. Somapa, near modern Jaugarh in Ganjam District, subsequently developed as the secondary headquarters of the Mauryan Kalinga. One of the basic factors that motivated Ashoka to conquer Kalinga was to capture the sea coast with its rich ports for the expansion of the maritime activities of the Magadhan Empire, which was kept in narrow limits as the entire sea coast from Ganges downwards remained under the control of Kalinga.

In the first century B.C. Kalinga became a strong power under the Chedi King

Mahameghvahana Aira Kharavela which is known from his famous Hathigumpha Inscription. In one of his welfare works he renovated and extended the aqueduct, which the Nanda King had constructed three centuries ago. The capital of Kalinga under Kharavela was Kalinganagari; (also mentioned as 'Nagar' in the Hathigumpha Inscription), which is identified with modern Sishupalagarh near Bhubaneswar. The construction of the aqueduct in the heart of the Kingdom by Mahapadmananda in fourth century B.C. and its renovation and extension by Kharavela in the first century B.C. can be considered as one of the primary steps of royal patronage for internal riverine trade, transport and irrigation in ancient Odisha. Ashoka's missionary zeal and use of seaports on the coast of Kalinga for the despatch of convoys for the propagation of Buddhism might have indirectly contributed to the enhancement of the status of the ports. This might have paved the way for the extension of attention and the patronage of feudal chiefs, Amatyas, Sresthis and the ministers of Ashoka, in the subsequent years. But the steps taken by Mahapadmananda and Kharavela were directly intended for the patronization of internal maritime activities and development of agriculture. The Chedi power was extended up to the Andhra country even after Kharavela.

### **Maritime Culture and Heritage of Odisha**

Located on the eastern coast of India, the ancient state of Odisha extended from the Ganges to the Godavari River, including parts of modern West Bengal, Odisha, and Andhra Pradesh. The navigable rivers, including the Ganges, Mahanadi, Vamsadhara and Godavari provided access to the interior, where precious and semi-precious stones were found, and their deltas provided natural harbours. From these

harbours, the people of the region traded by sea with Ceylon in the south, with Burma in the east, and further afield with the states of the Maritime Southeast Asia, Indochina and China. The maritime activity of Kalinga was so extensive that what is now called the Bay of Bengal was once called the Sea of Kalinga. The coastline is unstable. The southwest monsoon carries sediment along the coast, at times forming bars and spits that protect the harbours, at other times eroding the protective breakwaters. The rivers carry silt, extending their deltas and filling the former harbours. For this reason, some of the ports named in ancient times are no longer in existence, or have greatly declined. For example, Chilika Lake was an important harbour, but later became unusable by deep water vessels due to silting. Some of the ports mentioned by the geographer Ptolemy in the 2<sup>nd</sup> century AD were Nanigaina (Puri), Katikardama (Kataka) and Kannagara (Konarak). Ptolemy did not refer to the important ports of Manikapatna, Palur, Chelitalo, Kalingapatnam, Pithunda and Khalkatapatna. Writing later in the 9<sup>th</sup> and 10<sup>th</sup> centuries CE, Arab sources mention Odisha, Ganjam, Kalinganagar, Keylkan, Al-Lava and Nubin. After the 15<sup>th</sup> century, ports included Balasore, Pipili, Ganjam, Harishapur, Chandabali and Dhamra.

Excavations at Golbai Sasan have shown a Neolithic culture dating to as early as ca. 2300 BC, followed by a Chalcolithic (copper age) culture and then an Iron age culture starting around 900 BC. Tools found at this site indicate boat building, perhaps for coastal trade. Fish bones, fishing hooks, barbed spears and harpoons show that fishing was an important part of the economy. Some artefacts of the Chalcolithic period are similar to artefacts found in Vietnam, indicating possible contact with Indochina at a very early period.

Early historical sources record that Kalinga became subject to Magadha in 362 BC, regained independence during a civil war in Magadha around 320 BC, but around 261 BC was conquered by the Maurya emperor Ashoka (269 BC to 232 BC). The site at Sisupalagarh, occupied from the 3<sup>rd</sup> century BC to the 4<sup>th</sup> century AD, has been identified with Tosali, the provincial capital of Ashoka, and with Kalinganagari, the capital city of Kalinga after it regained independence early in the 1<sup>st</sup> century BC. The history of the following centuries is complex. At times the north and south of Kalinga were separate states, at times united. Sometimes Kalinga was independent, sometimes it was tributary to a more powerful neighbour.

The Bhauma-Kara dynasty ruled over Utkal, as the northern and eastern part of Odisha was then known, from the 8<sup>th</sup> to 10<sup>th</sup> centuries AD. These rulers paid tribute to Devapala (810–850 AD), ruler of the Pala Empire of Bengal, but Utkal regained its independence from his successors. For a period, the rulers of Utkal were forced to acknowledge the suzerainty of the Tamil Chola dynasty under their king Rajendra Chola I (1012–1044), with whom they became allied by marriage. After regaining independence, Anantavarman Chodagangadeva (1078–1191) established control over a wide region from the Ganges to the Godavari, moving his capital from Kalinganagar to Cuttack. The power of Odisha waxed and waned over the following centuries, but it was not until 1586 that Odisha finally lost its independence. Rules and regulations regarding construction of ships were recorded in the Sanskrit *Juktikalpataru*. The *Madalapanji* records that king Bhoja built many ships with local wood. The recovery of many woodworking adzes and other artefacts from Chilika Lake shows that Golabai was a boat-building centre.

Terracotta seals from Bangarh and Chandraketurah (400 BC to 100 BC) depict seagoing vessels carrying containing corn. The ships have a single mast with a square sail. The earliest depiction of ships in Odisha is in a sculptured frieze showing two ships, found near the Brahmeswar temple, Bhubaneswar, and now preserved in the Odisha State Museum. The first ship has standing elephants in the front part, two people seated in the centre and two sailor with oars at the rear steering the ship.

From June to September the summer monsoons blow from the southwest, from Ceylon towards Kalinga. From December to early March, the retreating monsoons blow in the reverse direction. Southeast Asia has similar seasonal wind patterns. Over Indonesia, in July and August the winds blow from Australia in a northwesterly direction, shifting towards a northeasterly direction as they cross the equator. The pattern reverses during January and February. Early navigators would have exploited these seasonal winds, navigating by the stars, the color of the water, the presence of sea snakes, and observation of the flights of sea crows and other homing birds.

The ships of Kalinga were not able to make long sea voyages without stopping along the way for food and water. Ships outbound from Tamralipta would have followed the Burmese coast, stopping at the Nicobar islands, a one month journey. From there, they continued to the southeast, then sailed down the Malay Peninsula and through the strait of Malacca, and onward to Java or Bali, or headed northeast to Indochina or China. An alternative route was southward down the coast of India, perhaps stopping in Ceylon, then southeast to Sumatra.

Palur, near the Rushikulya River in the Ganjam district, was an important port in the 2<sup>nd</sup> century AD. Archaeological exploration has unearthed fragments of Chinese celadon ware, Roman rouletted pottery and amphora pieces, showing that the port carried out significant international trade. An unusual medallion has a Kushana-style king with a Brahmi inscription on one side, and a Roman head with a Roman inscription on the other. A Roman coin of the emperor Tiberius has been found at Salihundam, and other Roman coins have been found at other sites, giving further evidence of trade with the Roman Empire.

Trade with Southeast Asia was established by the 1<sup>st</sup> century AD, and may have much earlier origins. Later findings include 12<sup>th</sup> century Ceylonese coins and 14<sup>th</sup> century Chinese coins. Similar coins from Kutchina in Sumatra point to a triangular trade between Odisha, Ceylon and Sumatra. Trading was not without risks. The kings of Kalinga, Siam and Java had to periodically mount expeditions to put down Malay and Bugis pirates operating in the Strait of Malacca and throughout Maritime Southeast Asia.

Manikapatna was a port on the banks of Chilika that flourished from early historical times until the 19<sup>th</sup> century AD. Excavations have found many types of pottery from different parts of India, and coins from Ceylon and China. The more modern levels contain Chinese celadon and porcelain, and Arabic glazed pottery. An 18<sup>th</sup>-century Mosque has an inscription saying sailors and traders prayed there before setting out on their voyages.

According to a 6<sup>th</sup> century AD source, Kalinga was famous for its elephants, for which it found a market in Ceylon, along with precious

stones, ivory, pepper, betel nuts and fine textiles. In return, Kalinga imported pearl and silver from Ceylon. Corn and rice were also exported. Traders imported spices and sandalwood from the east, some if it destined for onward transport to the Mediterranean market. A boat depicted in the Sun Temple of Konarak in the 13<sup>th</sup> century contains a giraffe, indicating trade with Africa, presumably carried on Arab vessels.

Between the 11<sup>th</sup> and 16<sup>th</sup> centuries CE, the name Kalinga was gradually replaced by Odra Desa, Uddisa and eventually Odisha. During the rule of Kapilendradeva (1435–1466 AD) the independent Oriya state established political supremacy over a vast territory outside the limits of geographical Odisha, ruling from the Ganges to Arcot in the south. His successors retained their hold over an extensive territory. During the rule of Prataprudradeva, from 1497 AD to 1541 AD, the kingdom extended from the Hooghly and Midnapore districts of West Bengal to the Guntur district of Andhra Pradesh. Arabian sailors began to intrude into the Bay of Bengal as early as the 8<sup>th</sup> century, and later Portuguese, Dutch, English and French ships became dominant, reducing the sailors of Odisha to the coastal trade. In 1586, the Muslim ruler of Bengal, Sulaiman Khan Karrani succeeded in conquering the land, ending its independence. Odisha was subsequently ceded to the Marathas in 1751, and came under British rule during the Second Anglo-Maratha War (1803–1805).

The physical features of the coastal regions of India are a sort of terra incognita. The coastal plains of Odisha are narrow in the north, wide in the middle, and narrow in the south (Sinha 1971). Coastal Odisha is characterised by wide deltas. The monsoons are a great force in shaping the shore features. The ports on the east coast of

India such as Ganjam, Kalingapatnam and others are protected by spits. The ports owe their existence to the projection afforded by bars and spits. The beach features work as natural breakwaters, providing relatively sheltered anchorage to these ports (Ahmad 1972). Further, the rivers of Odisha have created large deltas at their confluence with the Bay of Bengal. The Mahanadi delta starts its projection on north east of Chilika lake. The sediments brought by longshore drifting from the southwest during the Southwest monsoon, and currents or drifts are arrested in the Chilika lake. Starting from east there is a straight shoreline for about 120 km between the Mahanadi delta and Srikakulam. There are only two marine inlets within these long stretches, one at the narrow mouth (400-600 m) of the Chilika lake and the other on the mouth of the Rushikulya river. Chilika lake is located on the southwest corner of the Mahanadi delta and connected with the sea through a tidal inlet. It has wide sandy beach ridges and barrier spits which separates it from the Bay of Bengal.

Ptolemy's Geography of Ancient India, (2<sup>nd</sup> Century A.D.), mentions that major and prosperous ports of Odisha such as Nanigaina (Puri), Katikardama (Kataka or Cuttack), Kannagara (Konarak), and river mouths Manada (Mahanadi), Tyndis (Brahmani), Dosaron (Baitarani), Adams (Subarnarekha), Minagara (Jajpur) and Kosamba (Pipili or Balasore) had overseas trade relations (McCrinkle 1985). However, Ptolemy did not refer to the other ports of Odisha namely Manikapatna, Palur, Che-li-talo, Kalingapatnam, Pithunda, Khalkatapatna, which also played a dominant role in the maritime history of Odisha. Subsequently, Arab and Persian writers of the 9<sup>th</sup> and 10<sup>th</sup> centuries A.D. throw valuable light on the sea borne trade and

seaports of Odisha. Ibn Khurdahbin, Ibn Rasta and the anonymous author of the *Hadud-al-Alam* mention the main places and ports of Odisha under the Bhaumakara dynasty namely Mahisya (Midnapore), Jharkharo (hilly tracts), Odisha (Odisha proper) and Ganjam (South Odisha). In the Andhra region (a part of the Telugu speaking territory) the main ports were Kalinganagar, Keylkan, Al-Lava and Nubin of which last three have not been identified (Panigrahi 1981). The other post 15<sup>th</sup> century ports were Balasore, Pipili, Ganjam, Harishapur, Chandabali and Dhamra which are worth mentioning here due to their role in the maritime activities of Odisha during the colonial period (Tripathi 1997). Out of all these ports, some were active and continued to be so for long periods. Some ports became prominent during a particular period and perished or lost their significance subsequently. Many ports were used for export of commodities to far off countries, while some ports were meant only for internal trade and transport by boats.

The archaeological excavations at Sisupalgarh, Jaugada, Tamralipti, Palur, Manikapatna, Khalkatapatna, Kalingapatnam have yielded evidences of foreign contacts during early centuries of the Christian era. The excavations at Sisupalgarh Manikapatna, Radhanagar of Odisha, Chandraketurah and Tamralipti in West Bengal, Salihundam and Dharanikota in Andhra Pradesh, and Arikamedu, Poompuhar, Korkai and Alagankulam in Tamil Nadu have brought to light the evidence of Rouletted Ware which is datable to 2nd-1st century B.C. Moreover, Rouletted Ware is also reported from Buni Complex in North Java, Sembiran in north coast of Bali, Buu Chau Hill and Tra-Kieu in central Vietnam, Kantarodai and Jaffna in Sri Lanka and Mahastan in Bangladesh.

This ware was manufactured at Salihundam, Satanikota, and Kesarapalle of Andhra Pradesh and distributed to the places located on the west and northeast of Andhra Pradesh. The presence of Rouletted Ware in Bali, Anuradhapura and Java indicates that it might have come from Arikamedu or some other sites of Andhra Pradesh (Nigam 2001). Begley (1983) has suggested that Arikamedu was the main centre for the production of the Rouletted pottery in large quantity for trade and domestic uses.

It is believed that the Rouletted Ware is the evidence of Indo-Roman trade, and was imported from the Roman Empire. The coarser varieties were made in India. The XRD diffraction analysis (Gogte 2000) of Rouletted ware of South India and Southeast Asia shows that the mineralogical contents and the soil samples from coastal Bengal are the same. Rouletted Ware of Manikapatna is similar to that of Sisupalgarh and Arikamedu as far as the mineral content is concerned. Knobbed Ware has been reported for the first time from Sisupalgarh in Odisha, then at Jaugada, Lalitagiri, Manikapatna, and Radhanagar (Mishra 2000). Subsequently, knobbed vessels have been reported from northern Andhra Pradesh, coastal Bengal and Assam (Glover 1990). This ceramic is concentrated in the Early Historic Period. Further Glover (1996) has emphasised that this pottery is associated with Buddhist rituals. Knobbed vessels occur in different fabrics such as fine grey ware, Red and Black ware. Knobbed ware has a boss or a projection at the centre of the base. The time range of this ware is early centuries of Christian era. Similarly, the finding of Northern Black Polished (NBP) ware at the port sites and some other sites along the coastal Odisha, Andhra Pradesh and Tamil Nadu has provided evidence

of coastal trade on the eastern Indian littoral. The occurrence of Punch Marked Coins (PMC) and the NBP at Gedige and Anuradhapura came to light during the Mauryan period. The recent excavation at Anuradhapura and Mantai in Sri Lanka (Sarma 1990-91) shows the contact of Odisha with Sri Lanka during early centuries of Christian era.

Semi-precious stone beads have been reported from various excavation sites of Odisha and Southeast Asia. About 180 beads of carnelian, agate, chalcedony, glass and terracotta have been reported from Sisupalgarh (Lal 1984). Evidences of manufacturing of beads have been reported from Jaugada and Asurgada in Odisha (Mohapatra 1986). Further, Ban Don Ta Phet, Ban Chiang, Karbi, Khao Sam Kao of Thailand, Tanjong Pawa, Kalum Pong in Malaysia, Salebabu island in Indonesia, Beikthano in Burma, and Palawan island of Philippines have reported semiprecious stone beads (Glover 1990). The earliest site to have yielded evidence of Indian contact is the Ban Don Ta Phet in Thailand where a number of agate and carnelian beads have been reported. These beads belonging to 2<sup>nd</sup> to 3<sup>rd</sup> century B.C. appear to be introduced from India (Higham 1989). The bronze bowls with a knob in the centre of the base found in the burials of Thailand give an indication of Indian contact. The shape of these bowls is similar to those found in coastal Odisha and Bengal (Ray 1989). India has plentiful source of carnelian (Glover 1996) so that this semi precious stone and glass were imported from India to Southeast Asian countries in order to manufacture beads, and the same were exported again after the final production. Further there is evidence that bronze bowls with a high tin content found at Ban Don Ta Phet were certainly exported from Thailand. The Satavahana

rulers had issued bronze coins with high tin content (23%) and it appears that the tin was imported from Thailand.

The finding of coins along with other archaeological artefacts indicate trade contacts between one region and another. A unique type of punch-marked coins with ship symbol are found from the earliest levels at Chandraketugarh in West Bengal which are similar to boat symbol coins issued by the Satavahana kings. Such coins were also found on the Andhra coast. In Northern Sri Lanka a single mast boat coin in conjunction with a donatory inscription of 1<sup>st</sup> century B.C. is found. The ship symbol is noticed on the terracotta sealings and in the graffiti on pottery found from the coastal regions, as well as the trade centres along the Ganga. Similar types of objects from Vaisali depict a boat with a prow, stern, oar, passenger decks and a female standing in the boat (Ray 1991). The Satavahana coins depict both single and double mast ships anchored in mid sea. Gautamiputra Yajnasri (A.D. 184-213) issued these type of coins prominently. The 'ship' coins have been found at Buddham, Vidyadharapuram, Guntur, Chebrolu and other places on the east coast of India (Sarma 1980). The double mast ship type coins were also issued by the Salankayanas (Vijaya Devavarman, circa 280-293 A.D.) who succeeded the Satavahanas in the Vengi country (Sarma 1989). The Roman coins of Tiberius (A.D. 14-37) were found during excavations at Salihundam (Subramanyam 1964). Similarly the excavations conducted at Bavikonda and Thotlakonda in the district of Visakhapatnam reveal Roman coins of Augustus (31 B.C.-A.D. 14) and Tiberius (A.D. 14-37) (Sree Padma 1993). The Roman gold coins of Gordian, Constantine and other rulers found at Bamanghati and Tamralipti show evidence of contact with the

Romans (Warmington 1974). Four denarii, three of Augustus and one Tiberius coins were reported from Kotppad, and 23 gold coins from Gumada of Odisha (Turner 1989). One complete and two fragmentary copper coins with square perforation in the centre with Chinese legend were found from Khalkatapatna, belonging to the 14<sup>th</sup> century. Manikapatna excavation has yielded a Sri Lankan copper coin datable to 12<sup>th</sup> century with the legend Simad Sahasamalla (Pradhan et al. 2000). Similar coins have been reported from Kotchina in Indonesia which prove the maritime network linking coastal Odisha, Sumatra, and Sri Lanka (Behera 1994).

The excavations at Chandraketugarh, Bangarh and Hadipur in West Bengal have yielded Kharosthi inscriptions on seals, plaques and pots. The terracotta seals from Bangarh and Chandraketugarh depict sea going vessels containing corn flanked by symbols like conch and taurine. Such vessel types are known as Sasyadidhrta Sthali, a bowl shaped vessel filled with corn. Another such vessel has legend in Kharosthi-Brahmi script referring to Tridesayatra, meaning a voyage to three countries or directions. Yet another seal from Chandraketugarh reveals a type of vessel called Trapyaka belonging to the wealth earning Tasvadaja family. It may be noted that Trapyaka is a type of ship mentioned also in the Periplus and the Angavijja. The above vessel types as well as flanking symbols recall the Satavahana ships. It appears that the Kharosthi script was used by tradesmen settled in the lower Ganga valley of Bengal in good numbers during the third to first centuries B.C. and was mixed up with the Brahmi used by local merchants, developing a mixture type Kharosthi-Brahmi writing with North-western Prakrit expressions (Sarma 1991). The location of Asoka's Major

Rock Edicts at Dhauli and Jaugada suggests the existence of coastal route from Tamralipti to the present Andhra coast, which formerly constituted the southern part of the Kalingan Empire. It is known from the Hathigumpha inscription (1st century B.C.), that king Kharavela defeated the southern confederacy and "caused the procurement of pearls, precious stones and jewels from the Pandya king". He had developed his territory far and wide (Jayaswal 1983). The excavation at Sembiran has brought to light Kharosthi inscriptions on the pot sherds which shows the maritime trade contacts between Odisha and Bali (Ardika and Bellwood 1991). The epigraphic sources of the Malayo-Indonesian region frequently mention people called "Kling" which evidently derived from Kalinga and scholars generally agree that it denotes the people of Kalinga. The early legends of Java mention "twenty thousand families were sent to Java by the prince of Kling. These people prospered and multiplied". Java was styled as "Ho-ling" in the Annals of the T'ang period (A.D. 618- 906). Scholars usually believe that Ho-ling is the Chinese or old Javanese equivalent of Kalinga. This would suggest that Central Java was so much dominated by the people of Kalinga that the region was named as Kalinga or Ho-ling. The Telaga Batu (A.D. 686) inscription of Indonesia mentions the special skill of the people such as Puhawang (ships captain), Vaniyaga (long distance or sea faring merchants), and sthapaka (sculptors). The Kaladi (909 A.D.) inscription mentions wagga kilalan, meaning a group of foreigners which include Kalingas, Aryas, Sinhalese, Dravidians, and Pandikiras. The term banigrama (Sanskrit Vanigrama) means a merchant guild, which have been mentioned in several East Javanese and Balinese inscriptions. Similarly the old Balinese inscriptions of Semibiran B (915 A.D.) and

Sembaran A II (975 A.D.) also mention the term banigrama (Ardika 1999). The Indonesian inscriptions refer to foreign traders as (banyaga) which includes the Kalingas, Aryas, Singhalese, Dravidians, etc. and a merchant guild as banigrama. The Bhaumakara inscription (8th-10th century A.D.) refers to samudra kara bandha (sea tax gate) on the bank of Chilika, where taxes were collected from the sea traders of Odisha.

The people of Odisha dominated the overseas trade and continued their links to far off countries since the remote past. It was so prominent in maritime trade that Kalidasa referred in the Raghuvamsa to the king of Kalinga as Mahodadhipati or the Lord of Ocean (Nandargikar 1948). In connection with the seashore of Kalinga, the Raghuvamsa further mentions dvipantara (Indonesian Archipelago) from which breezes, filled with the scent of cloves, blew: anena sardham viharamburaseh tiresu talivanamarmarresu dvipantaravita lavanga puspeih apakrtasveda lavamarudbhih. Further, the Aiyamanjusrimulakalpa narrates to “all islands of the Kalinga sea” (Kalingodresu) from which appears that in the past the present Bay of Bengal was known as the “Kalinga Sea” being dominated by the ships of Kalinga (Sastri 1920-25). The Sankha Jataka, the Samudra Jataka and the Mahajanaka Jataka, mention that the traders from central India used to come from Benaras to Tamralipti, from where they sailed to Southeast Asian countries (Law 1967). The Mahavamsa mentions that Asoka sent his missionaries to Sri Lanka from Tamralipti. The Vassentara Jataka mentions Kalinga as a great commercial and industrial country, from which rice, fine cloth, ivory, diamonds and other goods were exported even to foreign countries. The Kathasaritsagara indicates that Tamralipti was the main port for

Chinese trade and commerce (Kar 1973). The Buddhist texts mention the contact of ancient Odisha with Sri Lanka from about the 5<sup>th</sup> century B.C. onwards. Trade between Odisha and Sri Lanka must have continued in the later period which resulted in the strong political and cultural links between two countries. The contact of Odisha with China is known from the accounts of Hiuen Tsang who refers to commercial activities of the people. Subhakara Simha, son of the king of Odisha, (Wu-ta (Odra) country), went to China carrying with him many Tantric texts in A.D. 790, who may be identified with Sivakara or Subhakara of the Bhaumakara dynasty who had sent a Buddhist text for the great Tang emperor of China. The Chu-fan-chi of Chau Ju-Kua written in A.D. 1225-26, refers to Kia-ling sea going vessels (i.e. Kalingaships) and their system of trade organisation. Chau Ju-Kua mentions two types of ships plying between Kalinga and Canton.

**Buddhism** played a significant cultural role in the relations between Odisha and Southeast Asia. Comparative studies of Buddhist art of Odisha and Southeast Asia show several common elements and resemblances. The archaeological excavations at Ratnagiri, Udayagiri, and Lalitagiri in Odisha have brought to light the remains of Buddhist art. The Buddha heads from these centres and those from central Java share common characteristic features of massive form, modelling affinities and facial expressions. Similarly the Buddha and Boddhisattva images of Borobudur, Indonesia, and Odisha have common traits. The Javanese Boddhisattvas from Chandi Mendut have their attributes placed on long lotuses in the style distinctive of the Lalitagiri figures of Odisha (Tripathi 2000). The presence of the giraffe, an African animal in the temple of Konark (13<sup>th</sup> century) suggests contact with Arab merchants

who might have been commissioned to bring this animal from Africa to the eastern coast. In the early 15<sup>th</sup> century the Chinese Admiral Chang Ho, who visited East Africa is known to have brought a giraffe to the Ming court of China (Behera 1977). Further the maritime pride of Odisha is also reflected in sculptural representation of boats in the temples of Puri and Bhubaneswar.

In early times, long distance overseas trade was not possible without making a halt at intermediate places for water and food. The ships of Odisha bound for Southeast Asian countries passed via the Andaman and Nicobar Islands. Sailors voyaging from Tamralipti, Palur and Kalingapatnam to foreign countries used the Nicobar Islands as a halting station. I-Tsing mentioned that it was a month's sail from Tamralipti to Nicobar Islands, and China from Sri-Vijaya was twenty days sail (Syamchaudhuri 1977). From Tamralipti there was regular sailing of vessels which either proceeded along the coast of Bengal and Burma, or crossed the Bay of Bengal and made a direct voyage to the Malaya Peninsula and then to the East Indies and Indo-China and beyond it. In making their voyages to Southeast Asia, the sailors and merchants of Odisha may have sailed around the Malay Peninsula through the Strait of Malacca. The other route must have been from Odisha to South India where one sailed through the area between the Andaman and the Nicobar Islands or between Nicobar Islands and Achin, the northern tip of Sumatra, disembarking on the peninsula around Takuapa or at Kedah. The ports of embarkation were Palur, Poompuhar, Arikamedu, Sopatma, and Masulipatnam from where ships sailed across the Bay of Bengal to the coasts of the Southeast Asia and the far East. Ships used to go to Java from the ports of Odisha and return directly to

Sri Lanka and other ports on the east coast of India. Further, these ships took a course to the northeast from Java to reach Canton. This was the route followed by the merchants who traded with the West and the East (Prasad 1977). There was a regular coastal voyage from the mouth of the Ganga along the eastern coast of India to Sri Lanka. People from all ports of India came by land or river route to the nearest sea port and then made a coastal voyage to Tamralipti, Palur or to one of the ports near Masulipatnam, from where ships made a direct voyage to the Far East across the Bay of Bengal. The sailors and merchants of Kalinga had landed at various places including Srikshetra in Burma, Takkola, Kokkonagara, Kataha Kadharam in Malaya Peninsula, Sri Vijaya in Sumatra, Purva Kalinga in Java, Tonking in Cambodia and Kwang-fu in China (Tripathi 2000).

The available sources such as the epics, Jataka stories, Raghuvamsa, Kathasaritasagar, inscriptions, and excavated antiquities bring to light the trade and cultural contact of Odisha with distant overseas countries through the ages. In spite of several hazards and the problem of piracy the Odisha seafarers undertook maritime trade for the sake of wealth. The archaeological findings at Sisupalgarh, Manikapatna, Palur shows that trade was flourishing till the Gupta period. As archaeological evidence is not found during the post Gupta period (6<sup>th</sup> -7<sup>th</sup> century A.D.) it appears that there was a decline of maritime trade through Odisha in this time. However, maritime trade revived during the Bhaumakara period and it flourished again after 10<sup>th</sup> and 11<sup>th</sup> century. The excavation at Manikapatna has brought to light pottery of both indigenous and foreign origin. Along the east coast of India Manikapatna is the only site from where varieties of ceramics have

so far been reported. The presence of pottery, coins, and art evidence indicates the impact of early sea trade between Odisha and the Mediterranean world. The discovery of Rouletted Ware all along the east coast of India and Kharoshthi scripts and semiprecious stone beads suggests that the internal contact between Odisha, Bengal, Assam, Tamil Nadu had already begun by about 2000 years ago. The evidence from Manikapatna proves the East and West maritime trade relations. With the increase of Roman influence along the Indian coast, the Indian traders left for, Southeast Asia countries in search of spices and sandalwood. Based on the available references and archaeological findings at Odisha, Southeast Asian countries, and other places, it is clear that the sailors knew about these lands and the products. It is worth mentioning here that historians have believed the weak successors, economy under the feudatories, attack by neighbouring kingdoms, imposition of taxes, and unskilled navigation contributed to the decline of maritime activities of Odisha. In addition to this it is noticed that the geological processes such as the coastal erosion, sea level changes, tectonic activities, natural hazards, sedimentation, and formation of sand bars and dunes in the navigational channels are equally responsible for the decline of ports of Odisha (Tripathi 1992-93). It is known that Balasore and Konark were the ancient ports, which are presently 15 and 4.8 km

away from the seashore respectively. Ahmed (1972) states that this is due to the uplift of land. Chilika was a busy port in the historical times and sedimentation caused the disuse of the port. The diversion of river course due to the formation of sand dunes made the Palur port non-operational. To understand in detail the geological processes from archaeological point of view no systematic studies have been carried out along the coast of Odisha. The coastal survey and offshore explorations at strategic locations, excavations at new sites, and comparative study of art evidence of Odisha may shed new light on the maritime activity of Odisha with the outside world.

The overseas trade and maritime activities in ancient Odisha catalyzed the creation, growth and development of various ports for overseas and inland trade. The process was based upon the need of the system and its evolution took place in commensuration with historical development of socio-political and religious systems and organizations. Until the advent of the Europeans the people of ancient Odisha had their involvement in the overseas maritime activities with an adventurous zeal and commercial motive. Gradually the oceanic trade of the traditional form declined owing to natural and political causes.

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# Aa Kaa Maa Bai

(The Lyric of ancient maritime legacy)

*Er. Raghunath Patra*

Once ancient Kalinga spread from  
Ganges to Godavari over three states  
West Bengal, Odisha, Andhra Pradesh  
Kalinga people were pioneer maritime traders.

They sailed swan-shaped ships (Boitas)  
To south eastern island region  
Burma (Myanmar), Malaysia (Malaka)  
Thailand (Shyam), Cambodia (Funan)  
Champa (Vietnam) and so on.

In Java, Sumatra, Bali and Borneo  
Even China, Japan, Rome, Arab, Cylon  
Some settled there with their business  
Some returned to Kalinga, their own.

They sailed in Monsoon wind, ocean torrent  
fortified with Aryan, Dravidian civilization  
Archaeological excavated materials reveal  
Chinese ceramic shreds, Roman Coins.

Aa' connotes Ashadha, Kaa' Kartika  
Shows up journey to S.East, return from Cylon  
Maa' connotes Margashira, Bai' for Baisakha  
Shows return from S.East, up journey to Cylon.

Ancient ports Tamralipti, Pithunda  
Khalkata Patna, Chelitalo, Docarene, Palur  
Due to loss, Piracy, Calamities, channel  
Trade discouraged and now no more.

Ships with fine cloths, silk, handicraft, goods  
Filigree, Ivory, sandal wood set out  
And return with jewels, gold, spices and others  
Thanks to maritime traders for bravery stout.

Commercial ties between various countries  
Slowly widened socio-cultural horizon  
Resemblance is there in languages, habits  
Which speaks of past maritime profession.

Balinese observe, 'Masakapan-Ke-Tukad'  
"Loy-krathong" in Thailand with Burning Candles  
Speak of ancestral ties of remote past  
As same time of the year, ritual functions.

To commemorate socio-cultural glorious heritage  
Odia takes dip in pond, tank, river  
On Kartika Purnima celebrates "Boita Bandana"  
Launching Banana Peel, Paper boats in water.

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# Overseas Trade and Maritime Heritage of Ganjam

*Dr. Benudhar Patra*

Overseas trade and maritime activities of ancient Odisha is one of the fascinating aspects of Odishan history. During ancient times, Odisha, otherwise known as Kalinga was a great maritime power. From time immemorial, she had her reputation for seafaring, and as such played a prominent role in the transoceanic commerce and maritime history of India. It was great in power and resources on account of its maritime trade and overseas colonies. It is believed that it was the flourishing maritime trade that led to the growth of urban centres and urbanization along the coast of ancient Odisha. The Ganjam region, which constitutes a vital part of Kalinga, had played a prominent role in its early maritime activities.

Ganjam, geographically acts as a bridge between two halves- the north and the south, and at a particular stage of history was the gateway to the Southeast Asian countries. It originally formed a part of the ancient kingdom of Kalinga, which is supposed to have been founded in the ninth century before Christ [c. ninth century BCE]. (Maltby 1918: 77) It possessed a vast coastline along with a better climatic advantage to her credit. An enormous amount of natural resources, a network of large and navigable rivers, dense forests in the interior abounding in strong timber which could be readily utilized for the construction of ships and boats etc., helped the people of this

region to acquire the nautical skill and enterprise for which they were justly famous in ancient times. The seamanship and navigation flourished in this region probably before anywhere else in the East coast. A good number of ports and the points of anchorage were dotted its coast starting from the Chilika in the north to the Mahendra Mountain in the south.

The maritime history of Ganjam can be traced back to c. fourth century BCE. It is proposed here to deal with the maritime tradition of Ganjam, which has grown under different royal dynasties during different periods, the ports, port towns, network of river system, navigation, urban centres, trade routes, articles of import and export and the commercial and cultural interactions with other countries.

Ganjam passed under the suzerainty of different dynasties at different stages of history. Most of the rulers extended their patronage to the lucrative as well as prospective overseas trade. It is believed that one of the basic reasons that motivated and tempted Ashoka to conquer Kalinga was to gain control over her vast seacoast with rich ports for the expansion of the maritime enterprise of the land locked Magadhan Empire. The very location of the Asokan Edict at Jaugada, a place far away from the actual scene of the war i.e. Dhauli is an indication of its association with

the port of Palur, a well known ancient port of Ganjam. As a matter of fact, it is argued that the location of Asokan Edicts at strategic points like Jaugada in Ganjam (Odisha), Amaravati in Andhra Pradesh and Girnar in Gujarat indicate the commercial importance associated with the maritime trade. (Ray 1987-88: 79)

During the time of Kharavela, reference to the port town of Pithunda is available. Kharavela conquered Pithunda in his 11<sup>th</sup> regnal year and made it a part of his vast empire. Pithunda has been identified as being a port somewhere around Kalingapatnam, which was a part of Ganjam at that time.

A large number of Kushana coins belonging to c. first century CE have been discovered from Jaugada. (Rath 1987: 71) The availability of these coins proves their wider circulation. Probably the Kushanas used the ports of Ganjam as an outlet for their overseas trade.

A part of Ganjam for some time passed under the supremacy of the Satavahana rule. The Satavahanas were famous for their maritime activities. In fact, the credit for the earliest depiction of a boat in a coin goes to the Satavahanas. (Murty 1993: 99; Ray 1987-88: 88) Hence, it is quite logical that they must have made use of the ports of Ganjam like Palur, Kalingapatnam, Pithunda etc. The Satavahana rule extended up to the Mahendragiri. The Satavahanas might have taken the advantage of the fall of the Chedis to conquer Kalinga, which was famous for its maritime glory. It is believed that the port of Palur could have attracted the attention of the Satavahana rulers, because during the second century CE, Palur as has been referred to by Ptolemy was the only significant port of embarkation to the Southeast Asia. (Gerini 1974: 47 & 743) After the Satavahanas, the Murundas (2<sup>nd</sup>/3<sup>rd</sup> century CE) played a conspicuous role in

the maritime history of Ganjam. After the Murundas, Ganjam came under the suzerainty of the Guptas who were known to have famous for their maritime activities. Samudragupta through his southern expedition established link with the ports of Ganjam while proceeding through the district. Hence, his successors must have used the ports of Ganjam. This is further corroborated by the voyage of Fa-Hien to China via Ceylon along this coast. (Legge 1972: 100) It was during the Gupta period the maritime trade of Kalinga was so flourishing that the illustrious poet Kalidas has referred to the king of Kalinga as *Mahodadhipati* (Lord of the sea). (Nandargikar 1891: 140)

During the Mathara period, the overseas activities of the Ganjam coast were brisk. The Mathara rulers encouraged trade in general and the overseas trade in particular, as a consequence many prosperous port developed on the coast of Ganjam. After the Matharas, the Sailodbhava dynasty, which is regarded as the greatest patron of Kalinga's maritime activities, utilized the Palur port because it ruled over the region on the banks of the Chilika lake. (Behera 1982: 13) The credit for establishing colonies and founding the famous Sailendra dynasty in the *Suvarnadipa* (Golden Island; Sri Vijay or Sumatra) traditionally goes to the Sailodbhavas. During the Ganga rule, although the centre of activities shifted to central Odisha yet we come across reference to various ports of Ganjam. The accounts of Perso-Arabic geographers refer to the port of K.nja or modern Ganjam during the 10<sup>th</sup> century CE. (Ahmad 1989: 23)

Ganjam had rich potential for the growth of overseas trade. The abundant forest wealth, the agricultural products from the fertile soil and the horn and ivory works were the backbone of the overseas trade. Mention may be made of articles like fine clothes, cocoanuts, indigo, spices

etc., as being the products of the area. Hiuen Tsang has referred to the availability of large dark coloured elephants in this region. (Watters 1961: 196)

A number of suitable ports existed on the Ganjam coast. Ancient ports like Palur-Dantapura, Dosarene, Pithunda, Kalingapatnam etc. have been referred to by different sources. The ports like K.nja, Sonpur, Barua, Potagarh etc. belong to the medieval and modern periods.

Palur was an internationally famous port on the Ganjam coast. The earliest reference to Palur as a port appears in the geography of Ptolemy during c. 2<sup>nd</sup> century CE who has named it as 'Paloura'. (Gerini 1974: 743) Ptolemy had associated it with an *apheterian* or the point of departure for ships bound for *Khyrse*. He has mentioned it as one of the bases for the preparation of his map. Palur acted as the only port of departure to the east on the Coromandel coast. Like Palur, even the Western Indian ports did not achieve such an international fame during this period. G. E. Gerini has identified Paloura of Ptolemy with Palur, a village situated in the Chatrapur sub-division of the Ganjam district. (Gerini 1974: 743) According to him, the *apheterian* or the point of departure for the ships was located somewhere near modern Gopalpur.

Palur has often been identified to be the same as Dantapura of the Buddhist *Jatakas*. The earliest reference to Dantapura is seen in *Mahagovinda Suttanta* of *Digha Nikaya* wherein it has been described as the capital of Kalinga. The *Jatakas* describe Dantapura as the capital of Kalinga during the period of Buddha where king Dantavakra was ruling. According to Pali *Dathavamsa*, Thera Kshema presented a sacred tooth relic of the Buddha to king Brahmadata of Kalinga who deposited it within a magnificent *stupa* at Dantapura. The relic

remained there as the most precious thing until the reign of Guhasiva, who dispatched the relic to Ceylon in the safe custody of his son-in-law Dantakumara and daughter Hemamala. The royal couple supposedly plied from this flourishing port of Palur, if Palur was the same as Dantapura. It is worth mentioning that this tooth relic is worshipped even today at Kandy in Sri Lanka. The *Mahabharata* mentions the capital of Kalinga as Dantakura, which could be the same as Dantapura. Pliny refers to a fortified town named Dandagula, which has been taken by Sylvain Levi as Paloura/Dantapura. (Sahu 1964: 258) According to the description of Pliny the distance between the mouth of the Ganga and Dandagula was about 370 miles whereas, according to Ptolemy the distance from the Ganges to Paloura comes to about 380 miles. This apparent dissimilarity in distance occurs because of the fact that Pliny measures the distance through circuitous highway, while Ptolemy followed a direct sea route. Dandagula of Pliny, thus, could be none other than Dantapura of the previously mentioned sources.

Scholars have tried to identify Dantapura to be the same as Paloura/ Palur of Ptolemy on linguistic grounds. Sylvain Levi (1926:98-99) and J. Przyluski (Grierson 1973: 650) have identified the port of Palur with Dantapura. According to them the word Paloura is of Dravidian origin and is in line with many such names ending with *our* or *ura*. The word Paloura, therefore, should be *palu* meaning tooth in Tamil and *ura* or *pura*, meaning city, i.e. tooth city. According to Sylvain Levi, the port town of Paloura exported elephant tusks, as an important item of export. Moreover, from *danta* (tooth) of the elephant the name Dantapura has been derived. As such, the Kongoda region in which Palur was situated has been referred to as a place of breeding good elephants, by the author of *the Periplus of the*

*Erythraean Sea* as well as by Hiuen Tsang. Hence, Sylvain Levi believes that Palur and Dantapura were one and same.

The regression of the sea has left the modern village of Palour at a distance of about 2 Km away from the sea. At present, no trace of the existence of an ancient port is available around the village. The ruling family of Palur has shifted to Berhampur, and the place is in total ruins. The only existing testimony to the ancient glory of Palur are the Bateswar and Aanleswar Siva temples in the midst of the sand dunes and the probable lighthouse on the top of the hillock which is now being worshipped as a *Siva linga*. A pillar like structure on the top of the hillock with the marking of a lamp at the top is being worshipped as a *Siva linga* in its broken form presently.

A careful scrutiny of the geographical location of the village indicates its suitability to be a port. A hillock standing north-south direction must have provided shelter to the ships from the wind coming from the sea. The water below it must have acted as a natural breakwater. It is quite certain that the sea was around the hillock sometime in the past and has left watermarks on the stone. The growth of two modern ports i.e., the Potagarh near the Rushikulya estuary and Gopalpur further substantiate the claim of Palur as an ancient port. However, it needs further research to settle the identification of Palur.

Dosarene was another important port of Ganjam. The *Periplus of the Erythraean Sea* describes that the sailor from Masalia proceeded eastward across a neighbouring Bay to reach Dosarene which had a good breed of elephants called Bosare. (McCrinkle 1973: 145). The place Masalia has been generally identified with Maisolia of Ptolemy or the modern Machilipatnam in Andhra Pradesh. (Majumdar Sastri 1927:67) To the east of this place was Dosarene near a

Bay noted for its elephants. The ivory yielded in Dosarene was known as *Dosarenic*. (Majumdar 1981: 310) Ptolemy has not mentioned Dosarene but a river with a similar name Dosaran is found in his enumeration of rivers, which occurs between the Maisolos and the Ganges. The Bay described here could be none other than Chilika, whose mouth was probably wide enough to make it a Bay.

In the 7<sup>th</sup> century CE, Hiuen Tsang, the Chinese pilgrim has described Kongoda as being famous for production of dark coloured elephants which were capable of long journeys (Watters 1961: 194). So, Dosarene of the *Periplus of the Erythraean Sea* could be in the same region as Kung-Yuto (Kongoda) of Hiuen Tsang, and the port of Dosarene could be somewhere on the Chilika coast like Palur or Manikpatna.

Ptolemy (Gerini 1974: 743) refers to an *apheterian* (point of departure), immediately to the south of Paloura, where the vessels bound for *Khryse* (the Malaya Peninsula) ceased to follow the littoral and entered the high seas. Gerini has identified the *apheterian* of Ptolemy with modern Gopalpur, just a little below the mouth of the Rushikulya. The *apheterian* of Ptolemy, however, evidently could be none other than Mansurkota near Gopalpur. Like Palur, the geographical location of the present village of Mansurkota indicates its suitability to be an *apheterian* in the ancient times. Here is a hillock, which could provide shelter to the ships in the bad weather and stormy occasions. Mansurkota is just two km south-west of modern Gopalpur and about seven km to the south-east of modern Gopalpur port (the port is located at a place called Aryapalli). Here at the foot of the hill, there is a sea goddess locally known as Gangeisuni or Gangachandi. This place is just 1 km to the west of the Gopalpur-Berhampur main road from Allipur. The local people describe it as a port in

ancient times, which continued up to the British period. From the observation of the present geographical location, it fulfills all the requirements at least to be an *apheterian* or the point of departure in ancient times. (Patra 2013:114)

Sonapur was another important sea port of Ganjam. It lies in lat. 19° 6' north and long. 84° 47' east on the seacoast where the river Bahuda enters into the sea 20 km away from Berhampur (Maltby 1918: 34). At a particular stage, it was the principal shipping centre for the navigators. The Bahuda River subsequently formed sand bars, which offered obstruction to shipping, and the port lost its importance. Excellent quality of edible oysters was found here which constituted one of the principal items of export from this port. The Indo-Arabic social customs and practices that are followed in the nearby villages' even to-day establish it as a medieval port. Some Hindu families of the adjoining villages bury their dead bodies in Muslim style, a practice that continues even to-day. These families are called as *Aruas* who are socially considered as half-Hindu and half Muslim. (Patra 2013: 116)

Barua or Barwah, another important seaport of Ganjam lies in lat. 18° 51' north, and long. 84° 35' east on the seacoast, and is about 33 miles south of Berhampur town by road. (Maltby 1918: 34) It is now in Andhra Pradesh, 6 km away from Sompeta and about 15 miles to the east of the Mahendra Mountain. The holy river Mahendratanya, which originates from the Mahendragiri (Mahendra mountain) flowing to the east of the Mahendra falls in the Bay of Bengal near Barua. From the accounts of Ptolemy, it seems that the port-town of Barua was one of the trade centres in the east coast during ancient period. The main items of export from Barua constituted among others coconuts, coir ropes, coir yarn, etc. Basudeva Somayaji, the author of

*Gangavamsanucharita*, has described that he went to Puri from Barua, a port in Ganjam by a boat and returned on land route to Khallikote after crossing Chilika lake in a boat in the year 1762 CE. (Acharya 1955-56: 50)

Kalingapatnam and Pithunda were two other important ancient ports of Ganjam though presently both are located in the geographical domain of modern Andhra Pradesh. At different stages of history, they were in the ancient Ganjam and were the leading ports on the east coast.

Kalingapatnam, lies in Lat. 18° 0' 20" N. and Long. 84° 0' 7" E. was another important port of ancient Ganjam. It was located at the mouth of the river Vamsadhara in the modern Srikakulam district of Andhra Pradesh. It lies 32 km north-east from Srikakulam proper. The name Kalingapatnam itself means the city of Kalingans, who earned reputation for their maritime activity on the east coast. Besides being a port for quite some time, it was the capital city of Kalinga. The archaeological excavation conducted here suggests that it was a fortified city since c. 3<sup>rd</sup> century BCE up to the early medieval times. (Patra 2013: 116) The findings of Roman coins from the excavated site suggest that Kalingapatnam had contact with the ancient Rome. Some gold coins have been also found in the site bearing the script of the Gupta Age.

Pithunda was a flourishing sea port of Ganjam during the ancient period. The Hathigumpha inscription mentions Pithundam/ Pithunda as a metropolis, which Kharavela conquered in his 11<sup>th</sup> regnal year. (Kant 1971: 16, 28, 51 & 52) The Jain *Uttaradhyayana Sutra* mentions Pithunda as a seacoast port town of Kalinga. (Charpentier 1922: XXI, 1-4) Ptolemy refers to a metropolis named Pityndra and locates it on the seacoast in between the mouths of the Maisolos (the Godavari) and the Manada (the Mahanadi) and as equidistant

from both. (Mc Crindle 2000: 68, 185, 386-387) Sylvain Levi has identified Pithumdam of Hathigumpha inscription, Pihumda of *Uttaradhyayanasastra* and Pityndra of Ptolemy to be one and the same. Keeping in view, all these it can be said that Pithunda port could be located somewhere near Chicacole region of modern Andhra Pradesh.

Besides the aforementioned ancient ports, Ganjam also fortunate to have ports and maritime activities during the colonial period. The Ganjam port, situated on the mouth of the river Rushikulya was the most prominent of them. It is about 35 km from the Berhampur city. In 1768, Edward Cotsford, the first Resident of Ganjam built the Potagarh fort (buried fort) just at the mouth of the river Rushikulya to suit their own purpose. The port was safe anchorage for ships. There was also a thriving ship repair industry. The port was famous for the export of various commodities such as rice, beeswax, iron, cloth, forest produce like stick lac and timber to Madras and other regions of the Coromandel coast. The local silk and cotton clothes were also exported from this port. It was the headquarters of a native sub-Magistrate. The Conservator of the port at Ganjam was also the Superintendent of Sea Customs (Maltby 1918: 32). There was also a salt factory. The gradual shifting of the river, however, led to a consequent change in the limits of the port. Once the chief port of the district, towards the opening of the 20<sup>th</sup> century, it began to gradually decline. However, the commercial association of the town had made it the political headquarters of the district, which was later shifted to Chatrapur because of the outbreak of a horrible epidemic (plague) in 1815.

The rivers like the Rushikulya, Bahuda, Vamsadhara, Nagavali, Mahendratanya and their tributaries served as the arteries of commerce since ancient times. The Rushikulya has its origin

from the Rushyamala hills of the Phulbani district. The mainstream as well as its tributaries such as Ghodahada, Baghua, Dhanei, Badanadi have their origin from the eastern slopes of the Eastern Ghats. The Badanadi joins the Rushikulya river at Aska. The river flows through the Eastern Ghats region of Phulbani and Ganjam districts. It drains to the Bay of Bengal near Ganjam, a little south of the Chilika Lake. Ganjam derived its economic potentiality from the strong hinterland of the Rushikulya valley.

Bahuda is another river of Ganjam flowing from the Singaraj Hills (Gajapati district) and enters into the sea at Sonpur. The river Mahendratanya originates from the Mahendra mountain. It flows to the east of the Mahendra mountain and passing through Mandasa runs into the Bay of Bengal at Barua. The river during the 2<sup>nd</sup> century CE was known by the name of Barua as a result of which the present town was named after the river at a later period. (Rath 1992: 79) The Vamsadhara and the Nagavali are two other important rivers which played significant role in the maritime history of the ancient Ganjam.

Until very recently all the rivers of Ganjam were navigable. Because of the navigable nature of the rivers of Ganjam, urban centres emerged on the banks of the rivers such as Samapa (Jaugada), Malatigada etc. The township of Samapa has been identified with modern Jaugada on the bank of the river Rushikulya near Purushottampur 30 km away from Berhampur. Asoka engraved his principles on an inscription at Jaugada on which he sought to base the administration of Kalinga and its border tribes. The excavations conducted here by Archaeological Survey of India have unearthed a well-planned and fortified township. The evidences of a full-fledged iron-using culture have been revealed from here. A number of material remains like plain pottery, painted pottery,

knobbed vessels, iron implements, beads of shell, bone, carnelian, and crystal quarts etc., of remarkable workmanship have been discovered from here. (Patra 2008: 79) The punch-marked coins and Puri-kushana coins have been collected from this area. The occurrence of Puri-Kushana coins is an indication of the prosperous condition of the township and its date may be assignable to the period between c. 3<sup>rd</sup> century BCE and c. 2<sup>nd</sup> century CE. i.e. the invasion of Ashoka and the voyage of Ptolemy. (Das 1983: 87) Further, the availability of above material remains indicate the adoption of various professions. Jaugada, in fact, stands as a mute witness to the life and culture of the people connected with the Rushikulya Valley civilization. (Patra 2008: 81) Malatigada, very near to the Rushikulya and its main tributary Badanadi was also a flourishing urban centre in the ancient times. Besides these ancient urban centres we come across many urban commercial centres like Bhanjanagar, Aska, Purushottampur, Ganjam etc. on the river banks which flourished because of commercial interaction. The commercial activities were not restricted to the inland trade alone but overseas trade as well. They carried on overseas trade through the seaports, which they reached through the rivers.

Since very beginning, the social setting of the area has been dominated by merchants. The businesspersons formed a large part of the population. Various social titles generally associated with maritime trade such as Sahu, Sahukara, Sabata, Majhi, Ghatuala etc. are very common in this area even to-day. It is said that these people in ancient times formed a community called the *sadhavas* (a rich community, but not a caste) who were exclusively associated with the overseas activities and maritime trade.

Ganjam had political, social, economic as well as cultural interaction with the countries of Southeast Asia and Sri Lanka. The Sailodbhavas

who ruled over the Kongoda or the Ganjam region migrated to *Suvarnadvipa* (Java/Sumatra) from the port of Palur and founded the Sri Vijaya empire there with a new nomenclature as Sailendra dynasty. (Patra 2017: 7-9) Subhakara Sinha, who embarked for China from the port of Palur in c. 715 CE; Hemamala and Dantakumar who sailed to Sri Lanka from the port of Palur and a host of others became the sole vehicle for the expansion of Buddhist culture abroad. Besides, the Kaundinya Brahmins who had migrated from the Mahendra mountain region of Ganjam founded the kingdom of Funan. The Funanians named their mountain "*Mahendra Parvat*" after the name of the Mahendragiri of Ganjam (Patnaik, 1992: 30). Mahendratanya, a famous river of the Ganjam district is held in high esteem in the Indonesian island of Bali. Even in the Balinese *stutis* (verses), the river Mahendratanya is mentioned along with other sacred rivers. This may indicate that some of the emigrants were from the *Mahendra Parvat* area of the Ganjam district of Odisha. (Behera 1993: 129).

The overseas trade had given profuse economic affluence to Ganjam in the past. Its decline had direct bearing on its economic potentiality leading to the abandonment of the flourishing seaports and maritime activities. With the increasing political instability and internal disturbances, the successive kings in course of time withdrew their patronage and left the ports to featherless isolation. The activities of the sea pirates, loss of profitability in trade together with the complexity of the society where crossing the sea was considered as sinful by the higher castes supplemented to this decline. Besides, the factors like sea level fluctuations, tectonic movement, coastal erosion, coastal sedimentation, development of sand dunes in the navigational channels, the fury of flood caused by the river Rushikulya time and again, frequent change of its

course etc., played a significant role in the destruction of the ports of Ganjam. Climatic changes affecting environment seems to have also contributed to the abandonment of the ports in the later medieval period. Finally, the advent of the Portuguese in the Bay of Bengal on the Odishan coast and the establishment of the French settlement at Potagarh sounded the death knell of the maritime prosperity of Ganjam, which went into oblivion. However, the establishment of the Gopalpur port not only revives the lost maritime glory of Ganjam but also place it once again in the maritime map of India.

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# Binayak Acharya as the Chairman of Berhampur Municipality

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## ABSTRACT :

Berhampur town is situated in the southern part of Odisha. It is only 8 miles away from Bay of Bengal and twelve miles away from Andhra Pradesh. By virtue of its geographical position, it is the melting point of three districts Ganjam, Koraput and Phulbani.<sup>1</sup> It came into existence in 1662 and the name 'Berhampur' is derived from 'Brahmakshetra'.<sup>2</sup> It is also stated that the name of the town is named after a Persian Ruler Berhamsaha.<sup>3</sup>

**KEYWORDS :** Berhampur Municipality, Election, Chairmanship, Municipal council, Councilors, Government, Administrations

## Introduction :

The Chief Minister Binayak Acharya, a teacher turned politician famously known for his uncommon sobriety and simplicity, honesty and integrity, popularly called as "Binayak Master" was born on 30th August, 1918 in Shankarpur street, in Berhampur, in Ganjam district.

He had held many important Portfolios and elected numbers of times to the Odisha State Legislative Assembly. He became the deputy leader of Congress party and leader of opposition from 1967-1971. In 1972 he became the minister of agriculture, co-operation, labour and employment, housing and urban development. Despite of holding important posts in state level he always had a passion to work in the local self Government.

Berhampur Municipality is considered to be the oldest Municipality in Odisha which came

into existence on 1st April, 1864, by comprising thirty five nearby villages.<sup>4</sup> In the wake of enforcement of the Orissa Municipal Act, 1950, which came into force on 16th April, 1951, the sanctioned strength of Berhampur Municipal Council was raised from 13 to 28.<sup>5</sup>

In accordance with the New Act the election to Berhampur Municipal Council was held in December, 1951. Brundaban Nayak contested from Hillipatna ward and got elected as a councillor by defeating his rival Bairagi Sahu.<sup>6</sup>

Election to Berhampur Municipal Council was held on 12th December, 1968. Binayak Acharya was elected as a Councillor. The other elected Councillors from different wards were Brundaban Nayak, Prabhat Kiran Deo, Jagannath Singh Deo, Mathurananda Sahu, N. Mohan Rao, Raghunath Mishra, Satyanarayan Padhy, Raghunath Patra, Trinath Sahu, Neerod Chandra

Panda, Gourahari Jena, Khalli Dalai, K.B.N. Rao, K. Kalimani, P. Suryanarayan Murthy, Narasingha Swain, Rama Chandra Madal, Sriharsa Panda, Ramahari Sahu, Raghunath Madhei and others.<sup>7</sup>

Subsequently, election for the Chairman of Berhampur Municipality was held on 9th May, 1969 at the Municipal Council Hall. The nomination of Brundaban Nayak for the Chairmanship was proposed and seconded by Binayak Acharya and Trinath Sahu, respectively. Brundaban Nayak retained the Chairmanship by defeating his rival by 23 to 5 votes.<sup>8</sup>

The next election for the Berhampur Municipality was held in the year 1973. Binayak Acharya and Dharma Mukhi were the two contestants in that election. The nomination of Binayak Acharya as the Chairman was proposed and seconded by Krushna Charan Patnaik and Sanyasi Sahu, respectively.<sup>9</sup>

Binayak Acharya ardently believed in the spirit of collective leadership and pinned strong faith in decentralizing the system of administration in the Municipal Council in order to induct the element of cohesion and also for the smooth functioning of multi faceted development work of the town. For this purpose, he constituted the following committees.

These were the Finance, General Health and Dispensaries, Public Works, Education, Water Supply, Legal Advisory, Octoroi, Revenue, Vigilance, Selection Committees. Binayak Acharya along with his contingent of Councillors geared himself to the task of development of Berhampur town.

The Medical College Hospital was located towards the extreme eastern side of Berhampur town. As a result, the people of western side of town were facing a lot of

hardships for getting immediate treatment. So in order to provide better and efficient medical facilities to these people Acharya and the councillors felt the need and requested the government to take steps to open one city hospital in the vacant houses of old medical college hospital.<sup>10</sup>

Due to the rapid growth of number of students in Berhampur town, the only government college which was existing then, was unable to accommodate the students. The excess strength created disciplinary problems and a good number of students were deprived of higher studies. In view of this, Acharya and other councillors requested the government to start a new college on the western side of the Berhampur town. He suggested that the same college would either be an independent one or function as a branch of Khallikote College.<sup>11</sup>

During the year 1973-74 sanctions were accorded to create new posts in a number of Municipal Schools. The schools were also permitted to open new classes.<sup>12</sup>

Festival advances were granted in the year 1973 to the class III and class IV employees of municipalities on specific conditions.<sup>13</sup> In the year 1973-74 Rs.30,000 and Rs.60,000 were sanctioned for light and market, respectively from Berhampur Municipality.<sup>14</sup> The estimate was granted to lay out 2 inch G.I. pipelines from the master plan area of the residence of district Judge. Sanctions were made for digging tube-wells at different places of Berhampur Municipal areas.<sup>15</sup> During the period Ankuli library was given monthly grant and a number of other libraries were also opened inside Berhampur Municipal areas.<sup>16</sup>

Permission was accorded to use the rooms of Berhampur Municipal School for conducting Rastrabhasa examination.<sup>17</sup> The extension was granted to daily wage posts who

were getting Rs.3/- per day.<sup>18</sup> Sanctions were made both for the repair of Berhampur Municipality Schools and their furnitures etc.<sup>19</sup> Steps were taken to grant loan to the Berhampur Municipal residence for construction of septic latrines.<sup>20</sup>

By the initiative of Acharya resolution was passed to sanction required finance to accord reception to vice president, Gopal Swarup Pathak who visited to Berhampur during his period.<sup>21</sup> The appointment periods of the Berhampur Municipal workers were extended by 3 months by 01.09.1973 in anticipation of government approval.<sup>22</sup> The annual license fees of cycle, rickshaw and bullock cart were collected. Required amounts were sanctioned for repair of Berhampur Municipal roads.<sup>23</sup> All the Berhampur Municipality schools and libraries were supplied with a good number of books in boxes.<sup>24</sup>

A number of electric equipments were purchased for Dakhinapur reservoir for its immediate repair and making it irrigational.<sup>25</sup> Sanctions were made for a number of electrification.<sup>26</sup> A lot of money was spent for the construction of building of primary schools.<sup>27</sup> The proposal was given to purchase agricultural land located towards western end of medical college and to sell it for the residential areas after due improvement.<sup>28</sup> Minor changes were made as regards the boundaries of each council areas and the employees of Berhampur Municipality were given extension of one year.<sup>29</sup> The co-operative homeopathic medical college of Berhampur had been given grant-in-aid in the year 1973-1974.<sup>30</sup> Besides these different social organizations were given sufficient aid by Berhampur Municipality.<sup>31</sup> Extension was given for one year to the temporary post offices running inside the Berhampur Municipal areas.<sup>32</sup> The Berhampur Municipal employees were given dearness allowances during this period.<sup>33</sup> It was decided that the government

would bear 90% of the dearness allowances and to the rest 10% would be borne by the Berhampur Municipality.<sup>34</sup> It was decided to sanction Rs.40/- as monthly grant and to provide 3 numbers of newspapers free of cost to all the Berhampur Municipal run libraries.<sup>35</sup> The proposal was sent to the government to provide Rs.60,000 and Rs.30,000 towards lightening arrangement at market places and residential areas respectively.<sup>36</sup>

Acharya had made a proposal to elicit public opinion regarding the slaughter of animals for meat and other related issues on the subject.<sup>37</sup> Municipal Executive Officer was permitted to cancel the license of any butcher without assigning any reason. It was the discretionary power of Berhampur Municipal Executive Officer to lease out slaughter houses and to give license to meat vendors.<sup>38</sup> Acharya had requested the state government to give immediate grant of Rs.5/- lakh to Berhampur Municipality for taking different developmental works inside Berhampur Municipal areas.<sup>39</sup>

Acharya stated that Berhampur Municipality was using about 80 acres of land for its different offices and the staff quarters of Berhampur Municipal employees located in different areas inside Berhampur Municipality. Due to non-availability of Gochar land inside Berhampur Municipal areas the cattle populations used to graze and roam about inside Choose and other public places. As a result, unhygienic conditions prevailed. As per rule the equal size of areas should have been made available for Gochar. Proposal was made to the state government to reserve the required areas of land in different areas for Gochar purpose. As per the decision of the Council, the state government and the Revenue Divisional Commissioner were moved to reserve 10% of land of every area in the town for the purpose.<sup>40</sup>

Binayak Acharya had a good stint as the Chairman of Berhampur Municipality from 04.08.73 to 18.03.74. This period was full of activities and many momentous steps were taken up in bringing about all round development of Berhampur Town as he considered it to be an important centre of South Odisha in particular and of Odisha in general.

Binayak Acharya never ran after power. Due to his kindness, affection and ever laughing face he had become a popular leader. He had maintained his simplicity all through his life. He was an important political leader in Odisha politics from 1967 to 1977. He had established himself not only as a responsible leader but also as a very good organizer. High moral standard, simplicity and concern for the depressed and distressed, were the hallmarks of his personality.<sup>41</sup>

It should not be forgotten that People's representative should look to the interests of the state without marginalising the needs and interests of the people of the area which has elected him. Looking from this angle, Binayak Acharya's personality was heightened for the development of the regions including that of his own.

Binayak Acharya's firm belief in value-based politics, steadfast commitment for incorruptible administration, non adherence to political equivocation, pledge for simplicity and transparency and urge for toleration and modesty, add a feather to the cap of his scintillating personality.

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# Srinivasa Ramanujan - A Polestar of Mathematics

*Akshaya Kumar Nayak*

## INTRODUCTION

An insignificant flower in the green woods to what extent short lived it may be, when blossoms, emitting its eternal sweet fragrance overwhelm enthraling the people surrounding causing overjoyed on overrating the elegant one. Likewise goes the story of a lad Chinnaswamy (or small god) Srinivasa Ramanujan Aiyangar, the great wizard of mathematics.

Mathematics can be regarded as the mother science having its role in studying quantity, numbers and space. Applied mathematics, branches of it, is an essential tool in many fields like physics, chemistry, biology, engineering, medicine and social sciences like economics, psychology, sociology, statistics and game theory, etc. which also creates inspiration for use of new mathematical discoveries. It is a glorious fact that in ancient times Indians had adequate interest in study of various fields of mathematics who led discovery of algebra and decimal systems. Many astrologers and mathematicians like Aryavat, Brahmagupta, Mahavir, Bhaskara born in this holy land of Bharat have kept up such rich and high tradition in the 20<sup>th</sup> century. The world-famous great wizard of mathematics, Srinivasa Ramanujan is such a burning example.



## BIRTH AND CHILDHOOD

The child Srinivasa Ramanujan Aiyangar was born on 22 December 1887 at his maternal grandfather's house at Erode by the river Kaveri in Tamilnadu. Special worships and prayers were made by his mother Komalatammal to propitiate the goddess *Namagiri*, the deity of the Namakkal temple and Komalatammal was blessed with a son Ramanujan who was treated as the son of the goddess Namagiri keeping his nick name Chinnaswamy (small god). While performing her household chores she was always singing or humming religious hymns, couplets or verses which her beloved son listened with fervor and attention, most of them were imprinted in his memory. Ramanujan could also recite passages and *Slokas* from Sanskrit and Tamil with great inner satisfaction and delight. Ramanujan's father,

Srinivasa Iyengar belonged to a high class Brahmin family was known for his honesty, integrity and diligence. He was a Gumasta (accountant) in a cloth merchant's shop at Kumbakonam at a monthly salary of Rs 20. Ramanujan, as a child was quiet and thoughtful. He was not given much scope for playing outside or roaming about with the street urchins of his age. He was much impressed with and was fond of the "*Kural*" (The great work of the Tamil savant, Tiru Valluvar) and on his moral principle on *Dharma*, self control and renunciation. He believed in not swerving from the path of *Dharma*.

### EARLY EDUCATION

At the age of five in 1892 Ramanujan's father got him admitted into the local "*Pial*" school at Kumbakonam (A *Pial* is a plinth level long platform running along the front of a house). There he learnt Tamil alphabets and elementary arithmetic. He often gazed the sky and asked his teacher subtle questions about the size and distance of stars in the solar system.

In order to overcome the acute hardship to manage the family with the only monthly salary of Ramanujan's father, his mother Komalamm kept few students in her house as paying guests and had some extra income. At the age of 10, Ramanujan stood first in the whole district and got scholarship in primary education which enabled him to get a half free concession in the school. The 10 year old Ramanujan, very often used to spend time with two neighbours. They were BA students who observed his deep interest and attraction towards mathematics. This created curiosity in them who injected the idea of Geometry, Algebra and Trigonometry in the child's mind. Strange enough, Ramanujan, very easily and quickly grasped all these subjects.

When he was in third form while the teacher was explaining the student that any quantity divided by itself was equal to unity he stood up and asked "if zero divided by zero was also equal to unity?" By this time he had mastered the properties of the three progressions. While in fourth form he completed Loney's Trigonometry and had already proved Euler's theorems. This BA student used him for solving difficult problems.

Ramanujan joined the Kumbakonam Town High School in January 1898. From those days his hidden brilliance in mathematics developed. Once his senior class student asked a difficult question to solve the problem of square root of  $X+Y=7$  and square root of  $X+Y=11$ ; within half a minute he gave the correct answer which was  $X=9$  and  $Y=4$ . The Headmaster, knowing his special ability, entrusted Ramanujan of class-X to prepare the time table to keep all the teachers engaged which was too tough a job for the teacher, and got the task done by him. He was awarded special prizes for proficiency in mathematics and rewards of merit when he was in class 7, 9 and 10. He discontinued working on slate and recorded his findings and concepts on sheets of paper, later known as his "Note Book".

### HIGHER EDUCATION

Ramanujan passed the Matriculation Examination of the Madras University in December, 1903 with first class and high rank which won him the Subramaniam scholarship for FA class. He was also awarded the Sri V Ranganaditya Rao prize of Kumbakonam School in 1904 for brilliance in mathematics. He joined in the 1<sup>st</sup> year of FA in the local Govt. College with subjects of English, Mathematics, Physiology, Roman, Greek history and Sanskrit. He spent most of his time in pursuit of mathematics. As a result, he failed in the annual examination

and lost scholarship. His father got him admitted in Pachaiyappa's College, Madras. In the examination of December 1907, he again could not succeed. His father didn't like him always indulging in mathematics and not earning for his livelihood. But Ramanujan used to hide himself under a cot and silently engrossed in his mathematical pursuit. Mathematician Prof S.R. Ranganathan observes: "Inner light began to lead him and the joy of cultivating the region of knowledge lighted up by it began to spur him on and on." The depression due to failure in FA examination or getting employment, poverty and penury could not repress it. Magic squares, continued fractions, hyper geometric series, properties of numbers – prime and composite, partition of number, elliptic integrals, etc. everything had to be done and discovered by him de-novo.

### PERIOD OF STRIVING

Deteriorated financial conditions of the family, Ramanujan's inability to pass in FA examination and his continued mental engrossment in mathematics disappointed parents who decided to get him married to divert his attention enabling him to lead a normal social life. On 14<sup>th</sup> July 1909, he was married to a beautiful bright eyed girl of 11 years. Ramanujan experienced some change after the marriage and did not like to be a burden on his parents, at the same time he was to struggle hard to become self-supporting along with providing adequate care for mathematics.

In 1910, he came to Madras in quest of service. He met with Prof. V Ramaswamy Aiyar, a deputy collector who had established the "Analytical Club" of lovers of mathematics which was subsequently renamed as "Indian Mathematical Society" (IMS) who helped

Ramanujan get a job in AG's office. But he had to quit it as it was a temporary one. Now jobless, Ramanujan fell ill due to improper nourishment and returned home. After recovery he returned to Madras and resorted to private tuition. Collector Dewan Bahadur R. Ramachandra Rao, Honorary Secy. of IMS who knew the research work on Elliptical Integrals and Hyper Geometric series and his theory of Divergent Series which was not then announced to the world and that he wanted a pittance to live on, helped him get a post of clerk in the Madras Port Trust (MPT) at Rs 25 per month. Ramanujan was greatly happy to stand on his own feet. His remarkable contribution was a paper entitled "Some Properties of Bernoulli's Numbers" was published in the journal of IMS in December 1911 and two more papers in 1912. Prof C.L.T. Griffith, Principal of Madras Engineering College, a well wisher of Ramanujan, sent his discovered theorems and formulae to Prof M.J.M Hill of London University who in his reply stated that Ramanujan had been puzzled with the very difficult subject of Divergent Series, as a result, some of the theorems on theory of Prime Numbers, though brilliant, was completely wrong. But his mastery of some other areas of mathematics was unequalled by any contemporary mathematician.

### RECOGNITION AND JOINING AS A RESEARCH STUDENT

At the suggestion of his friends, Ramanujan wrote about his work and sent to two eminent Professors of Mathematics at Cambridge who returned his letter without any comment. Subsequently he approached Prof G.H. Hardy, F.R.S. Cayley, Professor of Mathematics at Cambridge University who was highly surprised with the note-worthy papers and made

magnanimously a historical response making a turning point in the life of the wizard, putting India in the Mathematical Map of the world.

Ramanujan, who was also very religious, had written his first letter to Prof Hardy on the holy Makar Sankranti – a very auspicious day in the Indian calendar on 16<sup>th</sup> January, 1913 introducing him and his laborious work on mathematics. He enclosed 100 or more of his theorems and his intention for publishing if considered to have any value and sought his esteemed advice. This letter stormed the Mathematical Cambridge. Recognizing the genius Prof. Hardy on 8 February 1913 promptly acknowledged Ramanujan's letter and paid a tribute for his distinguished work. He advised him to get acquainted with Prof. E.H Neville, Fellow of Trinity College, at present at Madras delivering a series of lectures on Differential Geometry. Immensely delighted, Ramanujan conveyed his gratitude to Prof. Hardy. On the recommendation of Prof. Hardy and other dignitaries and the syndicate of the Madras University, Govt. approved a monthly scholarship of Rs.75 for Ramanujan's research work which was communicated to him on 9 January 1913. MPT also granted 2 years leave to Ramanujan who joined as the first research student of the university on the same day. Ramanujan met twice with Prof. Neville who went through his enthralling research work and was surprised greatly. As per him: "Being unaware of the recent advances made in mathematics, he was, beginning every investigation at the point from which European mathematicians had started 150 years before him and not at the point which they had reached in 1913." Prof. Hardy was eager to call Ramanujan to Cambridge.

## AT CAMBRIDGE

With the sincere efforts and help of Prof. Neville, Sir Francis Spring and the Governor, Madras, the University of Madras on approval of govt. sanctioned a scholarship of £250 per annum for two years, tenable in England from 1 April 1914 with free passage and expenses on outfit. This scholarship was subsequently extended for 5 years. At the request of Ramanujan a sum of Rs 60 from his stipend was granted and given to his parents at Kumbakonam. Ramanujan sailed for England on 1<sup>st</sup> March 1914, reached London on 7<sup>th</sup> April 1914 and got admitted into the Trinity College which granted him a lump sum scholarship of £60.

Ramanujan reached his appropriate destination, the new holy world of mathematics that waited for him which conjoined Prof. Hardy with him, developing a mutual relationship, which has immortalized both of them. Mr. Hardy could guide him rapidly who expressed that he learnt from him more than Ramanujan learnt from him. There were some difficulties for food as he was a strict vegetarian.

Mr. Arthur Berry, tutor of mathematics at Kings College, Cambridge expressed to P.C. Mahalanabish (renowned wizard of statistics of India), his student about Ramanujan's prodigious intelligence. He made large number of conjectures, most of the results apparently came to his mind without any effort, by his pure intuition. At the request of Madras University Mr. Hardy sent them a report on Ramanujan's work that 12 papers from 1914 to 1916 had been published in various British journals and one of them "Highly Composite Numbers" is the most interesting one and that his memoir was one of the most remarkable published in England for many years. In March 1916, Ramanujan was awarded the B.A

degree. His life in Cambridge was marked by ceaseless labour and dedication to mathematics. During his 5 years stay in England, his 21 papers were published in various European journals out of which 5 papers were written in collaboration with Prof. Hardy.

Prof. Hardy proposed the name of Ramanujan, though very young, was elected for the Fellowship of the “Royal Society” which is Britain’s most prestigious Scientific Institution, regarded as the highest National Honour by British or Commonwealth Scientist or Mathematician, on 28 February 1918. This eulogistic news was communicated telegraphically by Prof. Hardy to Ramanujan who was ailing at a clinic who reciprocated his thanks. Thus he was the first Indian FRS after 77 years.

Mr. Hardy had visited the ailing Ramanujan to know his health condition. He, with anxiety expressed that the number of the taxi by which he came was 1729 which was perhaps not an unfavourable omen. Ramanujan denied saying it was an interesting number of sum of two cubes in different ways i.e.  $1729=17^3 + 1^3 = 10^3 + 9^3$ . Hardy was amazed.

Ramanujan’s own Trinity College also honoured him electing with a Fellow on 13<sup>th</sup> October, offering him an annual stipend of £250 for six years without any duties and condition attached to it, which was communicated by Mr. Hardy to the Madras University. In response, Madras University also granted yearly allowance Rs 250 for 5 years from 1<sup>st</sup> April 1919 for his return journey and subsequent trips to Europe. He expressed his gratitude to the Registrar, Madras University and wished the entire surplus money after meeting his family requirement, should be used for educational purpose of the poor and

orphan children. This shows Ramanujan’s humility, his solicitude for his parents, wife and sympathetic concern for the poor and helpless.

His health declined as he succumbed to Pulmonary Tuberculosis. Though improvement was noticed, it was felt that he should join his family for proper care. He left England on 27 February 1919 and returned to Madras in January 1920. In spite of best medical treatment offered to him, he passed away to immortality on 26<sup>th</sup> April 1920 at the age of only 32 years 4 months and 4 days.

During his short life span he contributed more than 3000 theorems, and compiled nearly 3900 results. His discovery “Mock Theta Functions” was his last major contribution to mathematics.

The Birth centenary of Ramanujan was celebrated all over the world on 22<sup>nd</sup> December 1987 and at the Anna University, Madras. Prof George E. Andrews of Pennsylvania State University who had discovered, edited and compiled the “Lost Note Book” of the great genius was released on this occasion. Its first copy was presented by Rajiv Gandhi, the then Prime Minister to Smt. Janakiammal, Ramanujan’s wife (born in 1899).

The 125<sup>th</sup> Birth Anniversary of Ramanujan was celebrated on 22<sup>nd</sup> December 2011 which was to be closed on 22<sup>nd</sup> December, 2012. The 22<sup>nd</sup> of December is observed every year as the National Mathematics Day. India Post paid homage to this genius by issuing two commemorative postage stamps of Rs.5.00 denomination each on 22.12.2011 and another on 22.12.2012.

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# Kalinga, The Benchmark of Our Prosperity

*Dr. Bhubaneswar Pradhan*

The holy land of Odisha is somehow different in nature,  
A very marvellous state full of resources and the culture.  
Which could also emerge well for centuries in this earth,  
That is only our own state having a vast glorious past.

The Kalinga an old name of it made famous to the state,  
Which could occupy the significant honour in naval trade.  
The Sadavas on their voyages spreading trade in Indonesia,  
They were bringing many goods to make rich our Odisha.

With all the rituals they used to start well their journey,  
The traditional sound of conch cell was to accompany.  
In past it was an occupation to strengthen the economy,  
Which is just now a tradition to remember that destiny.

In the tenure of Biju Babu such an attempt was made,  
Our state Odisha could get vast resources by trade.  
The Kalinga is not only a word to denote our identity,  
It is a benchmark singing the anthem of prosperity.

Being a bonafide dweller of this very glorious land,  
We should always make also clear our own stands.  
For the progress of our this pretty and lovely state.  
We must join all our active hands to make it great.

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