BUILDING ENTREPRENEURIAL SPIRIT IN THE STATE OF ORISSA

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We come abroad for various reasons leaving behind our near and dear ones with whom we spent very precious moments. Their influence during our childhood leads us, in some cases, to hold very responsible positions in the world that is so foreign to us. The influence of our near and dear ones in our life and the societal environment of our up bringing offer inspiring challenges in carving our personalities. Therefore, it is a pressing cause that holds us morally responsible to serve our country to fulfill the social and economical obligations that are the key elements of the fabric of any society.

To fulfill these obligations we need to understand the operational environment that we must expose to in Orissa. India, our country, and specifically Orissa as the region of our origin are driven by socialistic value system since the independence. This system generates challenges with respect to building entrepreneurial mindset which is governed by the return on investment as a basic principle that runs the economic vehicle of the society. Therefore, to fuel the economic advancement in Orissa a strategy to build entrepreneurial spirit is deemed necessary. This approach is an effective way to address the poverty in Orissa.

Orissa is a reserve of natural resources. In most cases these resources or the raw materials after preliminary processing are sold at a price that is far below the price of the finished products. These finished products are developed by manufactures located mostly outside of Orissa.

Raw materials or the raw material after preliminary processing go through further processing to attain completeness of product as required by the customer. The steps involved during manufacturing require facilities that can perform advanced processing, and thus it necessitates opportunities for modern and sophisticated manufacturing systems. Therefore, the price of this processed material or finished product becomes much higher than the raw material originally bought by the manufacturers located mostly outside of Orissa.

Industry, thus, created in land of Orissa has a very limited opportunity for employment that offers competitive salary. Therefore, it is important that we plan for developing an infrastructure to retain the raw material till the point that the finished or semi-finished products are produced. This approach will create opportunities for more employment. Further, the salary structure will improve. Of course, this industry will demand personnel with advanced skills. It is undoubtedly said that Orissa has such human resource. Specific job related training will create required talent pool for new industry. The spending by the people with new earnings in Orissa will help grow the economy of Orissa.

This particular approach poses an interesting challenge to create a customer base in and outside of Orissa. This can be achieved by the partnering of governments, government of Orissa and the rest, national, and international. Further, the cooperation between entrepreneurs and the government of Orissa is necessary to help create an environment and a path to create such industry which will drive the economic engine of Orissa. To build and nourish the entrepreneurial spirit the government of Orissa should take the lead by making the system smooth, clear, and fast. The Orissa government should implement a system that ensures proper management and execution of a plan that involves selection, evaluation, monitor, control, and obsoletion of entrepreneurial projects. This way projects led by entrepreneurs are properly managed and the economic landscape of Orissa will take a new shape.

THE ODISSI DANCE SCENARIO IN THE UNITED STATES: OPPORTUNITIES AND CHALLENGES

Written by Aruna Mohanty
Co-Author: Gangadhar Pradhan

The state of Orissa in Eastern India possesses a rich cultural heritage. In fact, it is Orissa's unique culture, specifically its performing art and creative art traditions that have placed Orissa on the international map. The state's performing art tradition is most popular for its various dance and music styles. Not only does it have different folk and tribal styles of dance varying from region to region, such as Chhau, Sambalpuri, and Danda Naacha, but it also continues to keep alive the ancient classical dance style of Odissi. Similarly, Orissa's music tradition includes both folk styles of singing and classical Odissi vocal and Bhajan styles. In addition, its music is distinctive for its use of both stringed instruments and the unique percussion instrument, known as the *Mardala*. Orissa is also well known for its creative arts, which include pata painting, handicraft work such as silver filigree, and various handloom productions.

The wide popularization of Orissan culture abroad, specifically in the United States is primarily due to the efforts of NROs (Non Resident Oriyas) who have introduced and cultivated these various art forms. As a dancer, I would like to talk specifically about the dance scenario in the U.S. and acknowledge those who have been responsible for introducing and popularizing Odissi dance there. First, I would like to mention Dr. Sitinkatha Dash who sponsored the first ever Odissi musical programme in North America and organized performances for various Odissi exponents, including the late Smt. Sanjukta Panigrahi, the late Kelucharan Mohapatra, Aruna Mohanty, Gangadhar Pradhan, and the top most Odissi vocalists and musicians in the city of Minneapolis. In addition, with the help of not only NRO's, but also the entire Indian community of Minneapolis, Dr. Dash was able to organize the construction of a beautiful Jagannath temple.

Secondly, I would like to acknowledge Dr. Purna Patnaik, founder of the *Center for World Music* in San Francisco, California and proud father of accomplished Odissi dancers. In fact, even before his daughters entered the field of Odissi, Dr. Patnaik had been sponsoring and hosting numerous cultural programs for renowned artists. It is Dr. Patnaik's unwavering commitment and umbilical cord like attachment to his motherland that has inspired him to provide platforms for countless world famous Odissi artists including Sanjukta Panigrahi, Kelucharan Mohapatra, Gangadhar Pradhan, and Aruna Mohanty. Moreover, Dr. Patnaik has succeeded in creating an atmosphere on the west coast that has welcomed Non-Indians into the dance scene so that they may appreciate and enjoy the Odissi tradition as well.

Third, I would like to recognize Pratap Das, art lover and connoisseur, for organizing the first two major Odissi dance festivals in the Washington D.C. area. These festivals for the first time allowed for the congregation of the most reputed Odissi dancers from all over the world to create awareness and introduce the wide range of compositions Odissi provides. The festivals also provided a means for Indian American dancers to resolve any issues regarding dance they might have through interaction with reputed Odissi dancers from India. At the same time, these Indian American dancers were given exposure and recognized by imminent Indian gurus as up and coming artists.

Finally, I would like to name a few others who have contributed in keeping the Odissi tradition alive in the U.S. including Devi Prasanna Mishra, Arnapurna Biseval, Somidutta Behura, Susanta Patnaik, Kirtan Behera, Saroj Behera, Sulekha Das, Bijaya Das, Niranjan Tripathy and Srikanta Nayak.

Currently, there are rougly10,000 Oriyas in the United States and less than 10 well established schools of Odissi run by NROs. Two schools doing exceptionally well are Chitralekha Patnaik's school in Canada, Nandita Behera's school in Los Angeles and Ratna Roy's school in Washington State. Other schools include Susri Sangeeta Mohapatra's school in Michigan, Susama Mishra's school in New York, Dipa Kar's in Ohio, Niharika Mohanty's in San Francisco and the Center for World Music in San Diego. In addition there are a number of schools run by non-Oriyas, whose passion for Odissi dance have propelled them to open schools in an effort to share and pass down the tradition. Some of the directors of these schools include Chitra Krishnamurti, Sukanya Mukherjee, Jyanti Pain, all in Washington D.C., and Rajika Puri in New York. Many of these schools encourage and send willing students to Orissa where they are able to fully immerse themselves in Orissan culture and experience the Odissi tradition at its origin. Upon return to the U.S., these students are able to share and pass their knowledge and experiences to other students. Moreover, through these "study abroad" programs, a kind of quality control is established on the existing Odissi schools in the States.

Despite the tremendous efforts and contributions to cultivate Odissi dance by so many people in the United States, the continued growth of the dance tradition still faces a number of challenges. For example, the Oriya population with respect to the South Indian population in the U.S. is roughly 1 to 5. In turn, there are roughly 20 times as many more people working to uphold South Indian traditions, such as hosting Bharata Natyam/Kuchipudi performances, inviting South Indian dancers and musicians from India to perform, and opening South Indian dance schools. Hence the availability and convenience of learning the South Indian tradition increases and seeking students are therefore more inclined to learn the style which is most readily available. Thus, it becomes important for non-resident Oriyas to not only cherish their culture within the confines of their homes, but to encourage and promote it's growth everywhere, so that their traditions may not be forgotten.

A BRIEF REPORT OF THE PROCEEDINGS OF THE SEMINAR ON PRESENT AND FUTURE OF SCIENCE EDUCATION IN SECONDARY SCHOOLS

Held at : Capital High School, Unit-3, Bhubaneswar on 31.10.2004

Present -

1. The quality of science education in secondary schools has been deplorable. The gap between the oriya and English medium schools student has been enormously wide. The percentage of english medium (ICSE/CBSE) schools is nearly 10% while the rest Oriya medium schools. Out of the 90% of the student strength nearly 20% are really brilliant and they are being deprived of quality science education at par with their Engilsh medium counterparts. This is a great social injustice.

2. The teachers and students often do not read any other science book than the science book prescribed by Board of Secondary Education, Orissa.

3. Good students secure high % of marks in their Board exams but really do not have any real knowledge of science. So they fail completely in higher levels and become oblivious.

4. Due to poor quality education imparted in Oriya medium schools, even the middle class population is inclined to give their children education in English medium schools. So the strength in Oriya medium schools is fast declining.

CAUSES

1. **Quality of Books**

   The quality of science books followed by the students are extremely poor, uninteresting and unlike of a science book. The boks fail to motivate the students to learn science. In stead they confuse more and alienate the students from the study of science. In stead of learning the concepts and logic the students memorise the lines of the book for securing good marks in examinations. The teachers and students rather depend more on the *guide or key books* for their examinations than text books. Is it learning science??

2. **Lack of Participation of talented teachers to strengthen the school education**

   The authoring of books and framing of syllabus on behalf of Board of Secondary Education, Orissa are in the hands of a group of cycophant and mediocre persons from both schools and colleges/universities. They act more as "yes men" of the Board than contribute something original and positive.

3. **Inertia of BSE, Orissa**

   The Board of Secondary Education, Orissa the only body to prescribe syllabus and conduct examinations in secondary levels is not keen on developing the quality of science education in the state. It entertains large scale mediocrity in all levels. Its primary objective has been to maintain or improve the % of pass-outs in HSC examinations, not focus on quality of education.

4. **Inadequate staff and facilities**

Almost all schools have inadequate staff to teach science. There is no laboratory facility in schools to perform experimental activities in science subjects. That is why the quality of science education is so poor in our state. Some people think in this way. But we do not believe this to be entirely true. Adequate staffing and laboratory facilities help promote the quality of science education. There is no doubt in this theory. But that is the case if there is some quality in the education.

Suppose each school is given adequate science teachers and enough funds to set up laboratories in each stream of science, do you think that the quality of science education will be improved overnight and the students passing out HSC can compete with their English medium counterparts?? The answer is a big NO.

5. **Quality of Teachers- Inertia**

An ideal teacher acquires academic brilliance during his teaching career, though not in many cases in their student career. But we do not find that the teachers in general read science books other than the text books prescribed by the BSE, Orissa and Guide(KEY) books published by private companies. If the quality of teachers is poor, how can they impart quality education to students ? They do not like to change their mindset unless they see any commitment and direction from the higher ups. They are not to be blamed solely. They are the victims of a long standing inertia.

6. **Refresher Courses conducted for Teachers**

The refresher courses organised by various agencies such as BSE, Orissa, training colleges and the like are much below standard and do not improve their the teachers' capacity in any way. They simply are aimed at clearing their doubts from the prescribed science books. Hardly any special care is taken to build up their capacities and improve the standard of a science teacher. Experimental activities with a well planned course work are not done in such courses which hardly change their level of realisation and concepts.

7. **Reference books**

Our students are never recommended to read any reference books. Although reference books in our state for the secondary levels in Oriya is rarely available, the good students can be advised to read NCERT books. But they are never advised to do so. Neither the parents nor the teachers nor the BSE, Orissa recommend any reference book in science to read. For each of them, securing a good percentage in HSC is the primary objective. The placement in BEST TEN list is the sole aim and dream of the teachers and parents for the good students but not learn good science.

8. **Primary and Elementary Education:**

Scientific thoughts take shapes in primary and elementary levels at which students should get sufficient encouragement to learn science through observations. In Orissa, the science education imparted in lower levels is also deplorably poor. So the students coming to secondary levels come with no idea about science so they cannot understand anything in secondary level.

Although this is partly true, but we strongly believe if good books and good teaching are available, students can be groomed in a good way even in secondary level.

9. **Lack of Competitiveness among students**

Students are given only an ambition to enter into BEST TEN list in BSE, examination. They really lack competitive spirit. They are not encouraged to take part in any state and national level competitions in science subjects.

Remedial Measures

1. **Two Tier System** -

There should be a general science course for the commoners and an elite course for those who have real aptitude for science. This elite course should be optional.

We learnt that BSE, Orissa is introducing a new optional course in science subjects as per the NCERT books from coming session to cater to the needs of the good students of our schools. Let us wait and see in what form these elite courses are presented to the students and how far student community benefits from such course.

2. **Authoring of Reference Books**

More and more professors from colleges and universities and scientists from research organisations who are really talented and who are in the fag end of their career or have already retired should author articles and reference books in selected topics of their interest. We must feel that their participation in secondary level courses have become inevitable for the growth of science education in the state. We strongly feel that non-participation of talented professors and scientists in the writing of good books in oriya for the science subjects is one of the major causes of the deteriorating condition of science education in our state. So more and more reference books in Oriya should be written in all science topics of secondary levels.

3. **Monopoly of BSE, Orissa**

We appeal the BSE, Orissa to realise the need of the hour and recommend as many good reference books on secondary level science topics as possible. It can keep the publication of the text books to itself.

4. **Orientation-cum-Workshop for science teachers**

The teachers need motivation and orientation to get out of the inertia which has crippled them. Well planned and designed course with experimental activity in the form of workshop should be conducted on regional basis and central basis with stringent rules and regulations. Each science teacher should be duty bound to attend at least three such courses. There should be an assessment or examination at the end of such course and a teacher has to secure a minimum of 50% marks in that course

The Uranium offers itself to take charge of that course work and appeal the funding agencies like Govt., SCERT and the like to conduct such courses through ***The Uranium*** or similar organisations which will mean real business. Let the Government of Orissa impose upon the science teachers to attend the Uranium course and qualify the course. Lack of accountability has been the key to failure in everything. If a teacher disqualifies the course once, he/she should be given two more chances to do so.

The Uranium appeals the professors from colleges and universities who are really talented to join us in their respective disciplines so that we can form a pool of instructors to educate the science teachers in schools by offering a well planned course in all the science subjects.

5. **Experimental Activity:**

If there is a will, experiments can be demonstrated to the students without involving large scale expenditure. Without observing and performing experiment, the students can never love to learn science. What is needed is the zeal of a teacher to get himself involved in science teaching. If the books followed becomes activity oriented, then the teachers will be duty bound and feel interested for the activity in the class rooms. The Uranium is devising small and inexpensive kits in physical science topics with printed procedures

for the experimental activities by the teachers and students. ***The Uranium*** will make attempts to supply to all schools such kits with no profit. Govt. of Orissa should direct the schools to procure such kits from *The Uranium* by utilising their allotted funds.

6. **Talent Search Examination and Orientation Camp for the Students**

Motivation and orientation camps should be organised regionally and centrally for the students on the basis of talent. They should be exposed to experimental activity with all fundamental concepts in science subjects.

The Uranium is conducting state wide talent search examination every year and recruiting the best 60 students for motivation and orientation camps at Bhubaneswar. The outcome of these activities in the last two years has been overwhelming. The talented students can be motivated or oriented much more easily and effectively than the teachers. So motivation of students should be given top priority.

Similar workshops should be organised on regional basis and for longer duration for more effective motivation. It cannot be done because of paucity of funds. But slowly and steadily as more funds will be received by *The Uranium*, this activity will be extended to the regional levels.

8. **Goverment's Funding**

If Goverment of Orissa has some funds for the science education, we appeal to allocate some funds to ***The Uranium*** to meet the expenses in conducting students' workshop and teachers' workshop.

9. **NRO's participation**

Non Resident Oriyas are very much concerned for the degraded conditions of science education. They are interested to contribute for improving the conditions. Some of the NROs have already started contributing on individual capacities in small scales. But they can now contribute collectively on planned projects. These are the areas where NROs can participate.

1. To conduct teachers' workshop in different regions of our state. Because educating, motivating and orienting teachers is the major requirement for upgrading the quality of science education.

2. To conduct students' Motivation-cum-Orientation Workshops in different regions of our state. Because the students are very much moldable and they can be motivated far more easily than teachers.

3 To develop and upgrade our mobile laboratory for the purpose of using it at different regions in camps. For that purpose small equipments, chemicals etc. have to be purchased periodically

4. To create infrastructure for producing small, inexpensive experimental kits and models in each topic of science to supply to each school. Although the kits will be supplied on the basis of no profit, the initial development of such kits on a large scale basis will involve some initial expenses. But in long future it shall become self sustaining.

5 To publish good quality science books and science magazines in Oriya and English for the students in each topic. The initial business on the book will not fetch return. So initial investment will be necessary.

6. To motivate eminent researchers and professors particularly who are retired from their jobs and staying in Orissa or elsewhere known to NROs to come forward to contribute in form of educating the school teachers and authoring high quality books.

7. To organise seminar once or twice in a year to debate and discuss on the progress of the developmental activities undertaken and self introspection.

STATE OF SEEDS AND CALL TO MAKE A DIFFERENCE

Priyadarsan Patra

Introduction

Anything you can do, or dream you can, begin it. Boldness has genius, power, and magic in it. - Goethe.

Over the decades India's poverty has declined at macro-level, as reported by National Sample Survey Organization, but Orissa's poverty (both rural and urban) has stayed obdurate at 47%, by far the worst nationwide. Sustainable Economic and Educational Development Society (SEEDS) was formed in 1994 to promote and advocate for sustainable, equitable and decentralized development in Orissa and else where, with its fundamental emphasis on empowerment, education, self-help and micro-enterprise based thrusts.

SEEDS, catalytically, helps development workers (NGOs) and ordinary people alike to empower and help themselves. We work in partnership with the beneficiaries and executing bodies (NGOs) in a manner different from a typical funding agency, as would be evident from the analysis we perform before, during and after a local project is undertaken. Most of our volunteers continue to donate their time, energy and expenses to keep SEEDS functioning with zero overheads to a typical donor. We see that enthusiasm for grass-roots development among non-resident Odiyas and Indians has caught on to some extent. We are happy to note that two groups in California have joined SEEDS as chapters who self-govern themselves to promote the core principles of SEEDS, even touching beyond the borders of Orissa.

There were a couple of heartwarming, success stories to note this past year. For example, one is a *milk panchayat* in Singiri, funded by our partner CanOSA and supervised by SEEDS volunteers. Starting at10 cows, the villagers now have 17 cow-owners among them within two years, even though two died, two are infertile and one was sold. Moreover, a teacher at the children's school is provided for by the profits of the project. One major reason for the accomplishment is that the local project leader is deeply committed to its success, although himself not a beneficiary. He is an educator and is influential among the people.

The other success story, that we describe at length, is from Bagbahali village. The author made extended visits to the village (volunteers Sri Gopal Mohanty and Dhanada Mishra visited also.)

Bagbahali and our partnership with REACHD

Bagbahali is situated 60 km from Bolangir's district head-quarters and 20 km from the town of Patnagarh. The total area of the village is 700 acres out of which only 150 acres are cultivable land and the rest is covered by village forests and fallow or waste lands. The river Sukatel is flowing on the outskirts of the village. There are 350 people in 52 families of various tribes living in the village, *Ganda* being the dominant among them.

Drought is a permanent feature of people's life in this region. Local wage earning opportunities are nearly nonexistent. Droves of people migrate to neighboring states, with or without family in toe, in search of wages. Take for example Kailash Dharua's case in point: He is a landless farmer and a poor wage earner of Bagbahali. He migrated to Chennai with his family in 2002 to work in a brick making factory. After a few days, he was reported missing (and remains so). His wife and four daughters returned devastated to their native village. The district administration has neither found Kailash nor rehabilitated his family as yet.

Responding to such cases of despondency, REACHD (an NGO) sought a Pani Panchayat program to bring some long-term solutions to the village. With support from CAPART, in the year 1999 they had introduced 11 tribal farmers to banana farming. The farmers had cultivated Green Banana (Bhusabali) in one acre of land each. But this seemingly good idea quickly turned to naught when drought hit the area hard in year 2000. Thus, a *Pani Panchayat* (water council) type project was ripe for implementation under the able local leadership of Ramachandra Behera.

With financial and moral support from SEEDS in the year 2001 REACHD established a pani panchayat with 21 farmers, and a small irrigation project was completed from which 50 Acres of cultivable land is irrigated. Out of the total 50 acres of land, 20 are of *Bahal* (low land), 15 *Berna* (Medium) and the rest 15 acres of *Ant* (high land) category. While earlier it was possible to cultivate only once a year in the best low lands, now with our lift irrigation facility two crops a year are possible in all the 50 acres. The irrigation facility became functional late 2002, and subsequently, to date, the farmers have obtained two good harvests using this infrastructure.

Project Results

- Gave opportunity to 21 low-income farmer families for strengthening their economy and helped other villagers indirectly by creating local agro-based wage earning facilities.
- Enhanced in the productivity by providing irrigation facility and increased the income from Rs. 5000/- to Rs. 10,000/- per acre within a year of time.
- Migration checked: out of the total 30 migratory families 19 families did not migrate last year. More enrolled and regularly attending children in school.
- The farmers are now able to refund loans taken from local money lenders for their household expenses within a short span of time.
- The farmers now able to stock sufficient food grains for family use though out the year.
- Besides benefits above, the farmers jointly pay a) Rs. 23,000/- towards electricity charges, b) replaced a new transformer costing Rs. 9,000/- , and c) spend Rs. 2,000/- towards the maintenance of the pump set.

Thus, the Pani Panchayat program became a very significant mile stone for the poor farmers and this type of program needs to be further strengthened with follow-on support to make it a lasting and reproducible model for others. Some of the pictures taken by the author showing the micro-irrigation mechanism, and happy farmers amidst their crops are given below.



Broader *Pani Panchayat and SHG* work with Unnayan

We undertook a longer, larger and broader effort with field support by Unnayan, an NGO in eastern Orissa. Unnayan has recently sent a comprehensive postmortem report (you can find it at SEEDS website given at the end) studying the successes and the difficulties of pani-panchayats, micro-enterprise and self-help groups (SHG). The economic benefits to the villagers are significant. Other attendant benefits are enhanced self-worth and confidence, improvement of management skills, increase in savings, exposure to different marketing activities and events, learnings from success of individual businesses, and the motivation of others to replicate these ideas. Some of the problems faced include

"*Stringent institutional regulations*: In one way or other some members of SHGs are defaulters of bank loan. When a bank finds such member(s) involved in a SHG and the same SHG has applied for a loan, the bank authority rejects the loan application.

Negative political attitude: Political affiliation of the members to different parties and the vested attitude thereof sometimes becomes detrimental to the group interest.

Target oriented govt. schemes. Under the target oriented schemes of the government, women are tempted to accept loans and get involved in certain vocations decided by the government. Without considering one's capacities and skill in that particular vocation a loan comes as an illusion. This leads to improper management of the loan...."

Plan of action envisaged by Unnayan: A holistic approach integrating institution building, capacity development, net-working, market linkage establishment, monitoring of progress, and finalizing strategic inputs would help us achieve desired sustainability of the groups.

SEEDS Finance and Activities

Our expenses in 2003 were $12,003.00 . Donations (not including time and expenses of most of our volunteers) in 2003 were $3086.37. Our resource base in terms of volunteers, monetary donation and such declined last year, but we hope and strive to keep working, facilitating, and networking to inch toward what we believe is our common destiny.

We summarize in a table below our various project undertakings. You can find more details of these activities at our websites, myseeds.home.comcast.net and www.seedsnet.org . As you can see, we have many significant milestones achieved in Western Orissa and else where. We have, with your generous help in the past, touched a few lives. Any "movement" needs participation, and reaching a critical mass will have a "snowball" effect on the path of development we seek.

Project activities during 2003-2004 (not including chapters' projects)

Place (district)	NGO	Project	Goals
Jagatsingpur, Cuttack Kendrapada, Puri,	Unnayan	Intervention after super cyclone, promote self-reliance via SHGs	Formation of pani panchayats and introduction ofmicrocredit and sustainability
Ganjam block (Ganjam)	United Artists Association	repair cyclone-devastated school, provide better environment for education	Primary education, cyclone repair
Baghbahali (Balangir)	REACHD	Minor LI point, pani panchayat, income generation	Livelihood security SHG, microcredit
Kandhaichhapar, Chauldia (Bolangir)	The Humanity	Land leveling, food for work, check dam, composting	Livelihood security, sustainable farming
Nuapada	Kalahandi Vikas Parishad	Water harvesting, ponds	Livelihood security, natural resource preservation
Rayagada	Utkal Khadi Mandal	Supporting schools	Education in tribal area
Jhankarbahali (Sambalpur)	BISWA	Bamboo plantation, sustainability and micro-entrepreneurship	Livelihood security, cooperative cultivation
Mohana Block (Gajapati)	SACAL	Poultry farming training, SHG	Income generation, selfhelp, confidence building
Jagatpur (Jajpur)	SRDO	Poultry farming, goat rearing, kitchen garden	Income generation

Khurda	GJS	SHGs, mushroom farming	Income generation
Mahulapada (Dhenkanal)	Indira Social Welfare Org.	Candle manufacturing, SHG	Income generation
Angul	Bajiraut Chhatrabas	Deep bore-well and hand pump	Education; Earn and Learn
Bhubaneswar	Unnayan/ Dhanada Mishra	Ferro-cement boat for marginal or small-scale fisher-folks	Appropriate technology development
Kodala (Ganjam)	SAIMA	School for the mentally handicapped	Special Education and "integrating the voiceless"
Utkal University (Vanibihar)	Blind Students Project	Community donation for eye-sight restoration for the very poor college students	Targeted help for the very disadvantaged but meritorious college students

We have networked with other volunteer groups such as Orissa branch of AID. To illustrate our collaboration, here is an incident where we had remitted auxiliary funds to repair checkdams in Chauldia and Khandeichappar damaged by 2003 floods, but it took time for the checks to clear. To avert the risk of failing to repair the dams, AID loaned money to the executing NGO, and the farmers thankfully had a bumper harvest this season. To foster awareness and promote intelligent debate, we conducted a one-day seminar on "Sustainable Development for Self-Sufficiency" at Ekamra Haat in Bhubaneswar (July, 2003), in cooperation with AID,. This was attended by many NGO and village leaders, students of social welfare, and local intellectuals. These people were not passive but enthusiastically debated and articulated points of views. We later followed up with two joint NGO networking workshops in Western Orissa.

Future Plans

We should have a goal of raising at least $20,000 and of recruiting a few new active volunteers among us this year. So, what are we looking to focus on this year? Micro-enterprise, water harvesting, and project follow-ups to further strengthen areas we are already invested in. This year we strongly encourage younger members of our society born or brought up abroad to volunteer at some of our project sites in Orissa.

We also hope to support pilot projects such as the one proposed by SACAL for maize cultivation in tribal Gajapati district. We would like to sustain a bit longer our existing but fledgling micro-credit and micro-enterprise projects, as the beneficiaries learn to repay loans, and spread the fruits of their labor and our support. It takes a lot of effort and resource to make inroads, gain trust and traction. So, we should further strengthen our successful past projects and sites.

I also think that time has now come for us to "invest" strategically some of our resources in individuals who are the "social entrepreneurs" and who are on the field pursuing a revolutionary idea of socio-economic upliftment. So, who is a social entrepreneur? An entrepreneur who can Envision, Energize and Enable … he or she sets directions, aligns people, motivates serious action for social development. We should support such individuals through yearly fellowships.

Conclusion

As always, we love to hear from you, and dearly hope to receive your camaraderie in this effort at true and lasting development. We also need a fresh infusion from university students to shore up "the movement" that after all started within academic confines a decade ago. We you're your financial and moral support… and your participation.

"Vision without action is a daydream. Action without vision is a nightmare" says a Japanese proverb. Let's forge ahead for a better tomorrow.

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PREVENTING AND CURING BLINDNESS IN ORISSA: THE CURRENT INITIATIVES

Devi P. Misra, Huntsville, Alabama

According to W.H.O. statistics there are 45 million blind people worldwide with a further 135 million visually impaired people. India has 13 million blind people. There are two million blind children in India, and only 5% receive any education. Blindness and visual impairment has tremendous socioeconomic implications.

How can one help?

- Up to 80% of blindness is correctable or preventable.
- Cost of a cataract operation is $50.
- Cost of a Braille and mathematics kit for a blind child's education is $40.
- Cost of a village eye camp is $500 - restores sight of 30 people and treats 250 others.
- Cost of a mobile van is $12000-$18000

CURRENT NRO INITIATIVES IN ORISSA

1. **VISION CARE, BHUBANESWAR, & EYE CLINIC:**

Mr. Srimant Misra, a local MBA and entrepreneur, was initially involved in a World Bank funded rural health project in Keonjhar District. Creating his own foundation, he wanted to reduce avoidable blindness though optimal utilization of its resources. A makeshift eye clinic in a rented house since November 2000 has restored vision of 1625 cataract patients with intraocular lens implants. Vision Care, an outpatient outfit run under the same umbrella, has been helping in preventive eye care in children and in all age groups. Mr. Prabhat Misra of Union City, California has been involved in funding part of the effort. Dr. Jeetu Nanda, an internist from '98 in the St. Louis area, spent all of his childhood years outside Orissa and has had his medical school education in the Phillippines, yet he always wanted to do something benevolent at the grassroots level in Orissa. During his visit in 2002, he encountered a lot of people working selflessly with a genuine desire to help.

Dr. Prashant Mohanty, a professor in ophthalmology at SCB Medical College, arranged some financial help through "Help Age India" and has been conducting surgery. Recently, arrangements have been made to provide a YAG LASER, for treating retinal diseases, and an auto-refractometer to screen children's vision. A piece of land has been acquired with a view to build a state-of-the-art eye institution in the area.

For information:
Dr. Jeetu Nanda, 1758 Bighorn Basin Dr., Baldwin, MO 63011, jsnanda@aol.com
Prabhat Misra, 32579 Carmel Way, Union City, CA 94587

2. **THE SAMBALPUR PROJECT:**

Eye camps were held in rural areas in the outskirts of Sambalpur township in February 2003, December 2003, and February 2004. The camps performed eye check-ups for all age groups for glasses, performed preventive eye care for children and screened elderly people for cataracts. Those with cataracts were operated on in the government hospital in Sambalpur with subsequent follow-up by BISWA. The camps were conducted by Mr. Harekrushna Patnaik of Detroit and Mrs. Ranu Mahanti of East Lansing with the help of BISWA, a local NGO. 2004 OSA Souvenir 137 A seminar on eye diseases was arranged by Mr. Harekrushna Patnaik and was held in Sambalpur. The financing of the eye camps and the seminar was arranged by Mr. H.K. Patnaik of Detroit.

The Janasakti Eye Hospital was started in February 2004 in Sambalpur. A piece of land is being acquired. A committee has been formed to look over the project. Donations have been forthcoming from the local people.

For more information:

Mrs. Jayashree (Ranu) Mahanti, 517-337-9570, mahanti@pa.msu.edu, ranumahanti@yahoo.com

3. **THE BKMM ROTARY EYE HOSPITAL (DHENKANAL):**

Due to the enormity of preventable and curable eye disease prevailing in all parts of Orissa, the author was inspired and stimulated to encourage planning of a state of the art eye institution in Dhenkanal. The Orissa Foundation donated in 2002 three acres of land in Bauliabandh, six miles from Dhenkanal township. A local businessman donated one acre of land in memory of his mother. A 50 bed hospital is in the plan. The architectural design of the project is complete. A committee including local rotary members in Dhenkanal has been formed. The Orissa Foundation provided $22000 for obtaining the bank loan for the project. The bank loan of Rs 88 Lakhs has been approved. The Orissa Foundation has donated a further amount of $23000 for the construction to begin. Just this month, May 2004, the construction of the hospital has started. The hospital will have two operating rooms and ten paying and 30 nonpaying patient rooms. One operating room cost is set at Rs 1.51000 and both the operating rooms are spoken for. The patient rooms are at a cost of Rs 121000. Nine patients' rooms are committed by people in memory of their kin. One of the nine patient rooms is donated by a physician from Andhra in memory of her father. We expect more donations in this context once the construction begins.

The rotary does not help in construction but one can obtain a matching grant for equipment, which we expect to obtain as soon as the hospital building is close to completion, which is set for July 2005. Within India, not much in Orissa, there are many eye-related organizations that can help in obtaining equipment with local prices, which may be cheaper. The vision of the hospital would be not only directed at preventing and curing eye diseases, but to establish also as a center for research in eye disease. Once established, mobile vans will go within a radius of 75 miles to screen visually impaired patients. If we can establish five or six such centers in different parts of Orissa, each such center encompassing an area of 75-100 square miles of rural Orissa, then we will have achieved our goal of dealing with visual impairment in the state of Orissa. Two distinguished physicians from Orissa have kindly consented to facilitate as much help as they can muster to realize these dreams. One is Dr. Amulya Sahu, a practicing ophthalmologist in Bombay. Then we have Dr. Biren Sahoo, regional director for Southeast Asia for Welch-Allyn Company headquartered in Singapore. We need everybody's cooperation.

All of us are requesting those of you who are capable and also aspire to help in such endeavors, to donate 1% of your annual income to developmental projects in Orissa — irrespective of your own expertise.

For information:
The Orissa Foundation
TEL: 256-883-5499
E-mail: dmisra@bellsouth.net

NON-RESIDENT ORIYA FACILITATION CENTER (NROFC)

A DREAM CAME TRUE

Dr. S.K Dash, Former President of Orissa Society of Americas
Email: dash@uaslabs.com

To come to America for higher studies is a dream for many Oriyas. In the sixties only a few Oriyas had the opportunity to come abroad for higher studies. Most of them came through some government programs. For others it was a dream.

When I was in college in 1964, I discovered that it was not that impossible to come to USA. I applied to US universities as I did in India. I came to South Dakota State University with my own efforts and with loan. Immediately after my arrival I received assistantship to do my doctoral program in Nutrition.

I became the President of International Student Association of South Dakota State University and acted as Foreign Student Advisor as SDSU did not have a Foreign Student Advisor to look after international students' affairs. I encouraged all Indian students who applied to SDSU to come, guided them, helped them to select right departments, financial aid, housing and host families. My desire was to bring as many Oriya and Indian students to SDSU and other American universities as I could. I was very happy that with my efforts I brought more than three hundred students to America.

When I finished my Ph.D program in 1973, I accepted the position of the Director of Food and Drug Administration for South Dakota state. During my regular visit to Orissa I conducted seminars for prospective Oriya students, guided them and helped them to come to America for higher studies. I feel proud that many Oriya students today are in America with my guidance and help.

I went further. With the support and initiative of the then president of Orissa Society of Americas, Dr. Digambar Mishra and Late Dr. Hemanta Senapati we established OSA center in Bhubaneswar in 1993. The purpose of the center was to help and guide prospective Oriya students to come to America and other foreign countries for higher studies, exchange scholars, bring artists and scholars to Americas and other foreign countries and do other related projects.

When I was the President of Orissa Society of Americas during 1993-1995, I established Orissa America Resource Centers in Cuttack and Balasore. It was not computer age that time. These centers helped many students, artists and scholars to come to America and Europe.

The OSA Center in Bhubaneswar had the operating capital from the generous gifts from Late Dr. Hemanta Senapati and Dr. S.K.Dash. After two years, Orissa Society ran this center with OSA funds. For lack of funding from OSA and management problem, the OSA center in Bhubaneswar closed.

The only center now operating in Cuttack is Orissa-America Resource Center, managed by the past president of the Rotary Club of Cuttack, Mr. Debendra Nath Mishra. The funding for the operation of this center has been provided by Dr.S.K.Dash, the past OSA President. The center manager Mr. Mishra has conducted many seminars for students and has guided them to come to America. With his guidance and recommendation, literary figures such as Dr. Prativa Ray, Prof. Chandrasekhar Rath, Mr. Manoj Das, Dr. Harish Jena, Prof. Prahalad Mohanty, Gandhian leader Rabindra Mohan Das and others have come to America as speakers for OSA Conventions. With Mr. Mishra's recommendations, artists – Mr. Prafulla Kar, Subas Das, Kavita Dwivedi, Aruna Mohanty and others have come to America to perform.

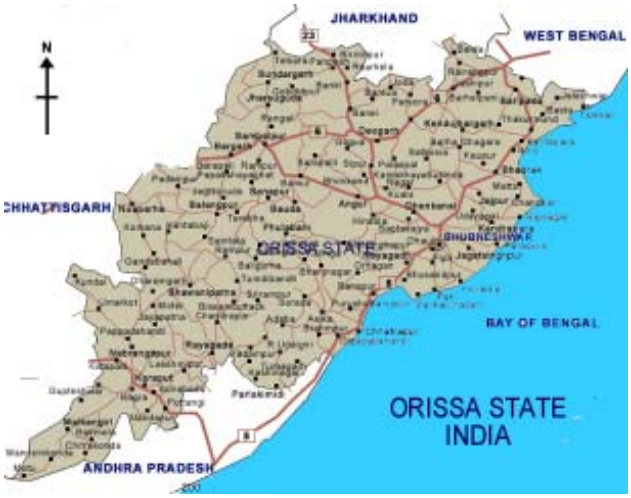
During my visit to Orissa in 2001, I met and discussed with the speaker of Orissa Assembly, Mr. Sarat Kar and the Chief Minister, Mr. Naveen Patnaik to establish a department for the Non-resident Oriyas affairs. A formal request was made to the Chief Minister through the speaker who came to Washington in 2002 as the Chief Guest of OSA.

Dr. L.N.Bhuyan, our OSA President organized a symposium in Bhubaneswar for NROs and others interested in Orissa development during December 2003 and invited the Chief Minister, Mr. Naveen Patnaik. The Chief Minister announced the creation of NRO Cell in Bhubaneswar at the historic OSA Symposium. We sincerely thank our Chief Minister for his understanding and for the establishment of the NRO Cell/Non-Resident Oriya Facilitation Center (NROFC). The NROFC at Bhubaneswar will continue as a venture of this NRO Cell of the Government of Orissa. A dream has finally come true.

With my personal request, the former Chief Secretary of Orissa, Mr. Sahadeva Sahoo has accepted the position of the coordinator of NRO Cell. Our heartfelt thanks go to Mr. Sahoo who is busy now for the registration of the NRO Cell. Mr. Tuhin Pandey, Special Secretary, GA Department, Govt. of Orissa and Officer-In-Charge of NRO Cell and our Chief Secretary, Dr. Subas Pani have taken personal interest to make sure that this NRO Cell, as a resource center, serves well the NROs. A website for the NRO Facilitation Center has been established with the help of local organizing Chair, Dr. Dhanada Mishra. Please visit www.nrofc.org to get up-to-date information on this center.

NAVA PRABHAT CHARITABLE TRUST

By Sudhansu Misra, Minneapolis, MN



NAVA PRABHAT TRUST

During my last visit to Orissa from Minneapolis I was invited by my friend Sri Bhagban Dev Nayak to visit an institution near his village in western Orissa. I accepted his offer and visited the place after a seven hour taxi ride from Rourkela. I found a school located in this remote part of Orissa in a *gurukul ashram* setting where modern education is given along with traditional spiritual teachings. Children who otherwise would have been struggling with poverty, disease and malnutrition are learning and excelling in a short span of 2 years since the Trust is founded. Bhagban Dev has been able to develop this residential school in spite of many obstacles. Let me try to describe what I saw and learnt.

LOCATION:

Located in Orissa state, 450 km west of the capital city Bhubaneswar, Nava Prabhat Charitable Trust is working towards betterment of lives of people in one of the poorest areas of India. You can reach there from Bhubaneswar by train to Sambalpur and then by taxi to village Nuapali near Padampur, or take a taxi from Bhubaneswar to Nuapali.

PEOPLE BEING SERVED:

Many residents of Western Orissa are victims of starvation, disease, and exploitation. People in the area are faced with frequent draught, flood and poor economic condition. Children suffer due to school dropout, lack of adequate health care, and malnutrition. People of this area are prone to crime and undesirable influence from outside. Children are the worst victims. They are desperate for any help that will make their lives better. Nava Prabhat (New Dawn) Public Charitable Trust is making an effort to help these people.

BACKGROUND:

Bhagbandev, a native of this area, was determined to make a difference. After serving at Swami Rama's Ashram in Rishikesh for many years under the guidance of Swami Veda Bharati, he returned to his village to setup the Nava Prabhat Public Charitable Trust. With hard dedicated work, humble resources and unfailing determination, he was able to establish a school on a 45-acre donated land in his village, Nuapali. The Trust is serving as a catalyst to attract the villagers from 30 villages for education, health care and community service. Surrounding the school, the grounds are used for fruit and shade trees, organic farming, herbal garden, and *gosala* (dairy farm). It is a residential school for the students and staff.

WHAT THE TRUST OFFERS:

Founders of The Nava Prabhat Trust have set their goals to promote programs that will meet the basic needs of the area. These include:

- **Education:** The trust operates a school for boys where modern education is given combined with traditional Indian teachings for building strong moral character and discipline. The school bears all costs for the students including food, clothing and books. Currently there are 35 students in 5th through 8th grades. The goal is to admit 25 students per year, up to a total strength of 250 students. When funds are available, the Trust plans to add computer and vocational training. The goal is to train the students with a trade that will help to support them and their families. The trust strongly believes education and equal opportunity for girls. To achieve this, plans are in place to add a school for girls that addresses special needs and training for women in the society.

an open-air class

- **Health:** Health care has been a major challenge for the trust. People suffer from malnutrition and chronic diseases. There is no hospital or clinic to provide adequate health care for people in these villages. Volunteers from the trust help patients to see a doctor in the government hospital located far away. Residents of the area depend mainly on untrained health workers. A clinic with a qualified doctor is urgently needed. The Trust has set aside a site for a clinic, but is unable start the clinic due to lack of funds.
- **Agriculture**: The area is prone to natural disasters such as drought and floods. The Trust is promoting organic farming with cow manure, compost sites, vermin-culture, and neem leaf based pesticide. 35-acre of land has been set aside to grow rice, wheat, and vegetables. An herbal garden for medicinal purposes has been developed. Plant experts from home and abroad are teaching the Trust workers to grow profitable agriculture products. With proper water management using rainwater and nearby river water, drought condition can be avoided. Help is needed in this area.
- **Community Service:** Trust periodically sets up camp to feed the hungry from the surrounding villages. Volunteers visit and advise villagers about hygiene and assist in food distribution. Villagers participate in activities that the Trust is trying to set up programs to strengthen the community.

HOW TO HELP

The Trust needs your help in making its programs successful. As of now, personal donations are the only source for funding the programs. The Trust requires:

- **Only $200 per student per year (55 cents per day) for room, board, clothing, books, teacher's salary etc.**
- **A clinic to provide patient care for the area**
- **Dormitory space for girls and additional classrooms for growing student enrolment**
- **A library for the school**

Your generous donation **in any amount is most welcome. You may sponsor students or help funding any of the above programs.**

To make a tax-deductible donation to the trust:

Contact Sudhansu Misra, Tel. 651/ 631-1145, Email: sudhansum@msn.com
Checks payable to: "Windingbrook Charitable Association"

Please visit Nava Prabhat School!*
To arrange your visit, contact Bhagbandev: Tel. 06683-228367, Email: bhagbandev@yahoo.com

Please visit Nava Prabhat's website! : www.navaprabhat.org

*Accommodation is provided for guests at the *Ashram*.

LIFECARE BIOTECH

An Overseas Oriya (OO) - Non-Resident Oriya (NRO) – Resident Oriya (RO) Joint Business Venture for Development in Orissa

Chandra K. Nayak
Ambika P. Jena
Santanu K. Jena
Amiya R. Nayak

Company

Lifecare Biotech (India) Private Limited (Bhubaneswar, Orissa) is promoted as an Overseas Oriya (OO) – Non Resident Oriya (NRO) - Resident Oriya (RO) supported biotechnology company. The idea of creating a biotech firm in Orissa was brewing in our minds since the late 1990s, however the specific business idea was crystallized during late 2003 through early 2004. Lifecare Biotech is a startup company, incorporated in 2004 and the virtual firm was started during 2003. The company's head office is in Bhubaneswar, Orissa, with two other offices in Madras, India and St. Louis, USA. Alliance Biotech is the New Business Division of the company that is pursuing various business and external alliances and partnerships with Indian/International firms and with local, national and international organizations.

Vision and Mission

The vision of the company is lifecare development in the business and service of life by applied biotechnology. The mission of the company is to contribute to the biotech business and development in Orissa and India. The missions are based on providing new products and services for lifecare aspects of humans, animals and plants as applied to biotechnology oriented healthcare and agriculture development. The company is creating a "local biotech market place" in Orissa to market/distribute high quality, international standard biotech products at competitive, cost-effective and affordable prices within the Orissa State.

The company has 5 long-term missions as follows:

1. Develop the businesses/marketing activities and build private-public partnerships with the Government, Public, Private and NGO sectors, and Small Business Entrepreneurs.
2. Develop a Private Foundation for social services and healthcare development projects.
3. New Ventures Development - spin-off new firms and/or establish partnerships/co-ventures with related/unrelated industries in Orissa.
4. Development of Human Networks, Organizational Networks and Consultancy/Advisory to facilitate local, external and international linkages to help in Orissa Development.
5. To become a micro-multi national company with head quarters in Orissa.

Business and Service Philosophy of the OO-NRO-RO BioVenture

We wanted to create a new type of business and service platform in Orissa to effectively collaborate with ROs, NROs and OOs to pursue a dream of establishing a BioVenture that connects us to our roots in Orissa (and with Oriyas), and India (and with Indians), and overseas Indians/non-Indians who are interested in Orissa. We believe that in Orissa, where new business and development opportunities in biotechnology-based healthcare, agriculture and lifesciences products and services can contribute to the development sectors in Orissa.

While we were able to establish global networks and pursue business and development opportunities in America, elsewhere in India and other international regions, for various reasons alongwith frustrating experiences from and in Orissa and India, it has been a challenge to initiate, coordinate, develop and execute new type of activities in Orissa. So we thought the best strategy is to develop a new system or create a novel platform where ROs, NROs, NRIs, OOs and Orissa Government and other interested parties and external partners can converge and collaborate in pursuit of development in Orissa and to pursue mutually beneficial interests. And the other idea is to utilize the personal and professional networks to contribute to the development in the home state of Orissa. The integrated business philosophy is to give back to the home state and to stay connected with Orissa and its people and to do business with and in Orissa. And to continuously ask us and remind us of a basic question on how can we help for the development in Orissa?

Biotech Business Activities

The business of biotech is a sophisticated science, technology and R&D activity that requires long term incubation and is financially intensive with high risks, failures with uncertain outcomes in research, commercial product development and most importantly, the products are very expensive to reach the unreachables, the poor people in the society. Lifecare Biotech's business model is based on how to make the biotech products and services available to the people through cost-effective and affordable mechanisms.

Lifecare Biotech is interested in the business activities such as - Biotechnology Products Marketing, Sales, Distribution, Promotion and Services. The following types of biotech/bio-based products/services are being planned to be offered by LBIPL through business arrangements with various manufacturers in biotech/vaccine/pharma/agro/consumer products sectors:

- Healthcare Biotech (hepatitis B vaccine, other vaccines, biopharmaceuticals, diagnostics, pharmaceuticals, healthcare disposables/consumables)
- Agricultural Biotech (plant biotech, Seeds, Foods, Nutrition)
- Veterinary Biotech (veterinary vaccines, animal health biologics, aquaculture)
- Ancillary Bioproducts (lifesciences, bio-based consumer healthcare, bioherbals, nutraceuticals)

We have either established or pursuing prospective business relationships with some Indian private companies, Indian transnationals, Indian subsidiaries of MNCs, small entrepreneurial biotech firms in India, USA and elsewhere in the world. The company also has future plans for biotechnology R&D, manufacturing, and import-export activities.

The company is promoting the mass vaccination idea and immunizations services for public health development and involved in distribution/supply of hepatitis B vaccine and biopharmaceuticals (insulin) through a cost-effective, affordable and sustainable system. The company has obtained Indian marketing rights for an American Bio-Mass Energy Plant as a turn key project. LBIPL has expressed interests to participate and help the Government of Orissa in the proposed Biotech Park project.

Value Proposition

The value propositions we offer are:

- High quality and international standard biotech products and services at competitive, cost-effective, sustainable and affordable prices.
- To create value for the company and its partners, clients, customers and Orissan people.
- To contribute to the bioentrepreneurship, public health development, lifespan development and agriculture systems in Orissa through private-public partnerships.

- To promote business, development, service and entrepreneurial culture in Orissa.
- To promote the use of biotechnology products/services for the benefit of the mass.

Private Foundation

LBIPL is initiating a project to establish a Private Foundation to be supported by the company to help in development and services. The goal of the foundation is to support specific activities with a focus on social impact projects, development, services, biotech-education, biotech-jobs, biotech knowledge management, biotech-based healthcare (immunizations services) and agriculture development in Orissa. The foundation in cooperation with the company would like to assist as a catalyst for biotech development in the State of Orissa through private-public sector-partnerships.

Biotechnology for Economic Development in Orissa

The biotech business case study on Orissa prepared by LBIPL had evaluated important issues such as: biotech sector development, R&D gap, bio-infrastructure, bio-industry, bio-incubator, products/services and had suggested a 5-point biotech development strategy (Reference 3). Orissa can benefit by creating biotech networks at the intersection of private industry, government, academia, regional institutions and external partners. LBIPL wish to participate with Orissa-based organizations to help in the developments in the State, and to contribute to the biotech business and development in Orissa.

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Amiya Nayak, PhD, MBA is the corresponding author on behalf of Lifecare Biotech, Orissa. CKN, APJ, SKJ, ARN and other members are the co-founders of the company. Dr. Nayak is a biotech- scientist, management consultant, entrepreneur and manager with broad interests in corporate business development and social venture development, and their linkages, and studies private-public-government partnerships. Amiya consults with Global, American, Indian and Orissa-based companies, and in some cases universities, government agencies and international organizations. AN and family is based in St. Louis, Missouri, USA, and life members of OSA. He is interested in helping in and contributing to the development in Orissa, and America-Orissa collaborative initiatives.
(Email: nayakamiya@hotmail.com)

FLY ASH – NRO ROLE IN MEETING THE CHALLENGE AND CREATING OPPORTUNITY FOR ORISSA

Dhanada Mishra
Kalinga Institute of Industrial Technology,
Patia, Bhubaneswar

Background

Electricity has become an indispensable part of modern life. Per capita consumption of electricity has become a barometer of development all over the world. For example the per capita consumption of electricity in USA is about 20 times that of India. Much of the electricity is generated by coal fired thermal power plants as coal continues to be a cheap and relatively abundant source of fossil fuel. Orissa is a state blessed with vast quantities of mineral wealth including the 50 billion tones of established coal reserves. Coal has been a source of energy for many centuries and can be the engine of economic growth and prosperity for our state. Unfortunately, till date most of Orissa's industries has consisted of extractive industry rather than manufacturing activity adding value to the mineral wealth of the state. The extractive industry including mining of minerals such as iron, bauxite or coal, has resulted with large-scale environmental degradation with out proportional economic benefits for the state and it's people. While, this situation is gradually changing for the better, the problems of industrial waste generation and its management is likely to pose major challenges for the stable and environmentally sensible economic growth of the state.

Given the abundance of our coal reserves, Orissa is gradually becoming an important center for generation of relatively cheap electricity from our thermal power plants. In addition to the major power plants such as the TTPS at Talcher, the Super Thermal Power Plant in Kaniha, the Orissa Power Generation Corporation (OPGC) in IB valley, many of our industrial units have their own captive power plants led by the highly energy intensive Aluminium industry. Nalco's captive power plant (CPP) at Angul is among the largest power plants in the state at an installed capacity of 960 MW with plans for another 240 MW underway. Smaller power plants exist at many other places such as ICCL in Chowdwar, Tata Sponge Iron, Sewa and Rayagada Paper Mills etc. These power producers have gone a long way in meeting the shortage of electricity in the state as well as in the country by augmenting the hydro-power that used to be our main source.

What is Fly ash

Fly ash is the residue left behind from combustion of coal in our thermal power plants. They tend to get air borne easily due to their lightness and hence the name. These fine particles are carried by the flue gasses to be collected in filters called Electro-static precipitators. The material is then most commonly disposed off by mixing with water and pumping the slurry to ash ponds. Fly ash particles are fine with average particle size being $2/100^{th}$ of a millimeter and spherical in shape. The main constituent of most of the fly ash found in India are oxides of Silica (~65%), Aluminum (~25%), Iron (~5%), Calcium (~1%) and other trace elements. Usually there is some amount of un-burnt carbon which varies between 0.5 – 3% in good quality fly ash and higher in others.

The Challenge of Fly Ash

Worldwide generation of fly ash is close to a billion tonnes a year, which is growing rapidly in countries like China and India. In India, we are generating almost 100 million tonnes of fly ash a year with a growth rate likely to be more than 10% or so. In Orissa we are generating 10 - 12 million tonnes of fly ash given the high ash content of our coal. On average for generation of 1 MW of power, 1500 – 2000 tonnes of fly ash is generated.

All of us would remember the severe air pollution caused by fly ash, which had permanently painted Talcher black with the atmosphere heavy with fly ash and coal dust. With the advent of improved pollution control measures, the situation with regard to air pollution has improved a great deal in general. How ever, the fly ash is still a challenge in terms of it's disposal as the slurry disposal method takes up a lot of land, costs quite a bit and is not sustainable. Hence there has been worldwide search for sustainable solutions and technologies for productive utilization of this industrial by-product.

The Opportunity of Fly Ash

While being an industrial by-product that needs a sustainable disposal method, fly ash has also come to represent a major opportunity for improvement in construction technology particularly with regard to concrete construction. The most important developments in concrete technology in recent years has come by way of use of fly ash in concrete as well as in the manufacture of construction products such as blocks, bricks, panels etc. Through the incorporation of fly ash in construction materials, numerous benefits are realized such as cost saving by reduction of use of Portland cement, improved quality of construction, improved durability of structures, Environmental benefits in reduction in use of Portland Cement as well as prevention of burning of traditional clay bricks causing air pollution and wastage of valuable top soil. Above all, a safe and sustainable disposal of this industrial by-product is ensured.

Using the above approach, industrialized countries with relatively stable fly ash generation have been able to achieve sustainable fly ash utilization levels through mandated use of fly ash in construction and other applications.

NRO Role in Fly ash Utilisation

A number of prominent NROs are working in field related to fly ash, environment, construction and so on who are already making sincere attempt to bring world's best practice and technology to Orissa as far as use of fly ash is concerned. A prominent example is Mr. Suren Mahapatra of Delhi. His company Complete Environment Solutions (CES) based in Noida is working with a number of fly ash generators such as NALCO, OPGC, ICCL etc. to implement world's best practice in fly ash management including disposal and utilization. ISG, a large company handling the fly ash generated by several thermal power plants in USA is interested in undertaking similar operations in Orissa.

Concluding Remarks

The issue of fly ash generation, collection, transportation, safe disposal and or utilization is likely to play a major role in the future well being of Orissa's environmental health as well as economic prosperity. NROs with relevant expertise can play a great role in bringing in technology, expertise as well as investment in this field, which can be a mutually beneficial proposition.

FIRST NRO VILLAGE!

Akshay K. Panda, Minnesota

When Dr. S. K. Dash was the president of Orissa Society of Americas during 1993-95, he urged upon our Oriya friends to adopt a village or a school, or to sponsor a student, or to do some development work in Orissa, where our roots are. He had said this at OSA conventions and in OSA Newsletters. His message has received tremendous response from NROs.

Our Oriya friends have helped in establishing Fakir Mohan University in Balasore, creating the Regional Blood Bank in Bhubaneswar, providing health care facilities in different parts of Orissa, adopting high schools, establishing colleges, providing drinking water facilities in villages, building shelter homes in villages, and participating in many more projects. Many of these projects have been reported at recent OSA conventions, 2003 OSA Symposium in Bhubaneswar, and in OSA souvenirs. When it came to adopting a village, Dr. Dash took the lead besides being in the forefront in the above mentioned projects. He adopted a village that is small with 121 families. He felt he could adopt this village and do the needed projects with his own funds. His first step was to build a temple that the village badly needed. It took him 3 years to get this temple construction complete in 1998. About this time Orissa had the worst cyclone and most of the houses were completely damaged. The villagers had no food to eat, no blankets to protect themselves from the cold weather, no seeds and fertilizers for cultivation, and no drinking water. Dr. Dash visited the village, talked to each and everyone, and understood the magnitude of the problem. He provided blankets to everyone in the village, provided cash to the needy to buy food and survive, provided seed and fertilizer to all the farmers, and helped many to repair their houses.

Dr. Dash set up a committee of three trusted villagers including his own brother to handle the funds provided by him for the village development project. Now, they are managing the projects. The first shelter home was completed in 2002. The second shelter home is scheduled to be completed in 2004. A primary school, which was completely demolished in the cyclone has been rebuilt with government funding. Three tube-wells are functioning. Fifty percent houses have been repaired and rebuilt with brick and concrete.

A cooperative bank has been established with Dr. Dash's seed money which is available to the villagers as loan for purchase of seeds, fertilizers, etc. There are 45 members in this cooperative bank now. Dr. Dash monitors the progress of all the village projects by phone and visits the village during December, every year. The goal is to make this a model NRO village, which will serve as a role model for others.

NRI/OSA MEMBER CONTACT INFORMATION

Following are the contact information of NRI/OSA members in academics and industries who may be contacted by various academics institutes, universities/colleges, faculties/researchers/students primarily form state of Orissa for potential research collaboration, visiting faculty/research opportunity, seminar talks, student advising etc. The support and involvement by members is completely voluntary in nature.

Name	Institute/0rganization	Contact Information	Area of Interest
		AGRICULTURE AND VETERINARY SCIENCE	
Prof. Binayak Mohanty	Texas A&M University College Station, TX, USA	ProfessorDepartment of Biological and Agricultural Engineering 301C Scoates Hall Texas A&M University College Station, Texas 77843-2117 Phone: (979) 458-4421, Fax: (979) 845-3932 Email:bmohanty@tamu.edu Web: http://baen.tamu.edu/users/bmohanty/	Hydrology
		ENGINEERING, MATHEMATICS, COMPUTING AND INFORMATION TECHNOLOGY	
Prof. Manoranjan Misra	University of Nevada, Reno, NV, USA	Professor and ChairMetallurgical & Materials Engineering, University of Nevada, RenoOffice: LMR 469Reno, NV, USA Phone: (775) 784-1603, Fax: (775) 327-5059 Email: misra@unr.edu Web: http://www.unr.edu/mse/Misra.html	Separation processing, extractive metallurgy; Surface chemistry; Environmental engineering, remediation of contamina-tedsoils and mixed wastes; Hydrometallurgy; Application of biotechnology in mineral processing and Waste remediation.
Prof. Jayadev Misra	The University of Texas at AustinAustin, TX, USA	Professor and Schlumberger Centennial Chair Dept. of Computer Sciences Taylor Hall1 University Station C0500 The University of Texas at AustinAustin, TX 78712-1188, USA Phone: 512-471-9550; Fax: 512-471-8885 Email: misra@cs.utexas.edu Web: http://www.cs.utexas.edu/users/misra	Computer Science
Prof. Laxmi N. Bhyan	University of California, Riverside, CA, USA	Professor Computer Science and Engineering 319 Surge Bldg.University of California, Riverside, CA 92521 Phone: (951) 827-2347, Fax: (951) 827-4643 Email: bhuyan@cs.ucr.edu Home Page: http://www.cs.ucr.edu/~bhuyan/	Computer Science and Engineering

Prof. Chita R. Das	Pennsylvania State University University Park , PA, USA	Professor Dept. of Computer Science and Engineering Pennsylvania State University University Park , PA 16802 Phone: (814)-865-0194 (O), Fax: (814)-865-3176 Email: das@cse.psu.edu Home Page: http://www.cse.psu.edu/~das/	Computer Science and Engineering
Prof. Rabi N. Mohapatra	Texas A&M University College Station, TX, USA	Associate Professor Department of Computer Science 520B H. R. Bright Building Texas A&M University College Station, TX 77843-3112 Phone: (979) 845-5787, Fax: (979) 847-8578 Email: rabi@cs.tamu.edu Home Page: http://faculty.cs.tamu.edu/rabi/	Computer Science
Dr. Sukant K. Mohapatra	Lucent Technologies, Holmdel, NJ, USA	Lucent Technologies101 Crawfords Corner Road Room 3B 428A Holmdel, NJ 07733, USA Phone: (732) 949 8120, Fax: (425) 645 7830 Email: skmohapatra@lucent.com	Computer Science, Telecommun-ication
Prof. Prasant Mohapatra	University of California at Davis Davis, CA , USA	ProfessorDepartment of Computer Science 2063 Kemper Hall University of California at Davis Davis, CA 95616 Tel. (530) 754-8380, Fax. (530) 752-4767 E.mail: prasant@cs.ucdavis.edu Web: http://www.cs.ucdavis.edu/~prasant/	Computer Science
Prof. Durga Misra		Professor Department of Electrical and Computer Engineering Room: 339 ECEC New Jersey Institute of Tech. Newark, NJ 07102 Tel:(973) 596-5739, FAX:(973) 596-5680 Email: dmisra@adm.njit.edu Home Page:http://web.njit.edu/~dmisra	Electrical and Computer Engineering
Prof. Chitta Baral	Arizona State University Temple, AZ, USA	Professor Department of Computer Science and Engineering Arizona State UniversityIra A. Fulton School of Engineering Brickyard Suite 572, 699 S. Mill Avenue Tempe, AZ 85281-8809, U.S.A. Phone: 480-727-6047, Fax: 65-2751 Email: chitta@asu.edu Web:http://www.public.asu.edu/~cbaral/	Computer Science
Prof. Dhabaleswar K. Panda	Ohio State University Columbus, OH, USA	Professor Dept. of Computer Science and Engineering Dreese Lab 785 The Ohio State University 2015 Neil Avenue Columbus, OH-43210, USA Tel: (614) 292-5199, Fax: (614) 292-2911 Email: panda@cse.ohio-state.edu Web: http://www.cse.ohio-state.edu/~panda/	Computer Science Network-based Computing
Sanjit K Bhanja	Cleveland State University, Cleveland, OH, USA	1801, East-12th St, Apt# 1806Cleveland, Ohio-44114 Tel.: (216) 479-0171 Email: sanjoey4u@yahoo.com Home Page: www33.brinkster.com/sanjit	Computer and Information Science
Prof. Keshab K. Parhi	University of Minnesota Minneapolis, MN, USA	Professor Department of Electrical and Computer Engineering, University of Minnesota 4-174 EE/CSCI Building 200 Union St. S.E. Minneapolis, MN 55455 Tel: (612) 624-4116, Fax: (612) 625-4583 Email: parhi@ece.umn.edu Web: http://www.ece.umn.edu/users/parhi/	Digital Signal Processing (DSP) algorithms, architectures, techniques, and design tools.

Prof. Radha K. Mahapatra	University of Texas Arlington, TX, USA	Associate Professor, Dept. of Information System and Operations Management College of Business Administration 502 Business Building University of Texas at Arlington, Box 19437 Arlington, TX 76019-0437 Tel: (817) 272 3590, Fax: (817) 272 5801 Email: mahapatra@uta.edu Home Page: http://www2.uta.edu/mahapatra/	software development methodologies, knowledge management, web-based end-user training, database design, data mining, and IT management
Prof. Brajendra Panda	University of Arkansas Fayetteville, AR 72701	Associate Professor Computer Science and Computer Engineering Department 313 Engineering Hall University of Arkansas Fayetteville, AR 72701 Phone: (479) 575-2067, Fax: (479) 575-5339 Email: bpanda@uark.edu Home Page: http://comp.uark.edu/~bpanda/	Database Systems Computer Security Computer Forensics Information Assurance
		ARTS AND LITERATURE	
Prof. Prasanta Pattanaik	University of California, RiversideRiverside, CA, USA	Professor, Department of Economics 4128 Sproul Hall University of California, RiversideRiverside CA 92521-0427 Tel.: (909) 827-1592, Fax: (909) 787-5685 Email: ppat@ucrac1.ucr.edu Web: http://www.economics.ucr.edu/people/pattanaik.htm	Economics
		MEDICAL AND BIOLOGICAL SCIENCE	
Dr. Kailash C. Bhol	Harvard School of Dental MedicineBoston, MA, USA	Oral Medicine, Infection and Immunity Harvard School of Dental Medicine188 Longwood AvenueBoston, MA 02115, USA Tel. Home: 617-739-6128, Work: 781-246 6053 Email: kailash_bhol@hms.harvard.edu	Oral Medicine, Infection and Immunity
Dr. Sarat K. Dalai	Johns Hopkins University School of Medicine Baltimore, MD, USA	Research Fellow, Johns Hopkins University School of Medicine Division of Immunology, Department of Pathology 720 Rutland Ave., Ross 664-E Baltimore, MD 21205, USA Email: sdalai1@jhmi.edu	Immunology, Pathology
Dr. Alekha K. Dash	School of Pharmacy and Health Professions Creighton University Omaha, NE, USA	Professor and ChairDepartment of Pharmacy SciencesSchool of Pharmacy and Health Professions Creighton University2500 California PlazaOmaha, NE 68178USA Phone: 402-280-3188, Fax: 402-280-1883 Email: adash@creighton.edu Home Page:http://www.creighton.edu/~adash/	Pharmacy Education and Research
Dr. S.K. Dash	UAS LabsMinneapolis, MN, USA	President, UAS Labs9953 Valley View Rd Minneapolis, MN 55344 Ph: (952) 935-1707, Fax: (952) 935-1650 Email: dash@uaslabs.com Web: http://uaslabs.com/sections/about/dash.php	UAS Laboratories manufactures & markets probiotics and antioxidants
		SCIENCE (PHYSICS, CHEMISTRY ..)	
Dr. Sangrama Kesari Sahoo	University of Akron Akron, OH, USA	Research Associate, Department of Chemistry University of Akron190 E Buchtel Commons Akron, OH 44325-3601 Phone: 330-972-7352 (Off), Fax: 330-972-5256 Email: sahoo@uakron.edu	NMR Spectroscopy

NATIONAL INSTITUTE OF SCIENCE AND TECHNOLOGY (NIST)

An NRI Educational Venture

Dr. Sukant K. Mohapatra, Founder and Chairman
Dr. Patha Mallick, Dept. of Electronics and Communication Engineering

Driven by the spirit of excellence, the National Institute of Science and Technology (NIST), at Berhampur, has risen fast to create a benchmark in quality technical education and high caliber Industrial Research since its inception in 1996. The institute has been established by core group of professionals with primary objective of:

- Having an institute with academic standard at par with international universities
- Provide an environment for overall growth of the students including personality development, leadership quality etc., in addition to achievement of academic excellence in their respective filed of study
- Focus on applied research in the area of computers, communication and other evolving fields.
- A strong industrial relationship in providing collaborative research and training
- A center of excellence, where student, faculty, industrial organizations and other institute can effectively participate in academics, applied research and development.

NIST is led by its founder Chairman Dr. Sukant Mohapatra, (Lucent Technologies, USA) and Director Mr. Sangram Mudali, B.Tech from IIT, Kanpur and MS (USA). It is the dream of the founders that the institute is to be the center of academic excellence at par with leading institutes of the world, in their home state of Orissa.

The academic ambience of NIST is enriched by faculty from US universities and other top-notch Indian universities, who train students both on permanent and visiting assignments. The brighter aspect is that it has been able to build on its reputation as a technical knowledge provider through continuous innovations. NIST is fast becoming the most preferred institute of top JEE and AIEEE rank holders. This has been made possible by the relentless effort put in by our selfmotivated faculty and staff, while upholding the highest professional standards of education.

The NIST Campus - a Nestling for Budding Technocrats

NIST is located in sylvan surroundings on the foothills of Palur Hills. It is about 12 km from Berhampur City in southern Orissa, and 16 Km from beach resort town of Gopalpur-on-Sea. Landscape experts have converted the 45 acres of land to a beautiful and imaginatively done campus, dotted with more than 2000 trees of a variety of species with waterfalls, sprinklers, acres of rolling grass, cactus gardens, etc. The library, the Internet center (with a dedicated 256 KBPS VSAT), Computer Center and the Food Court are open to the students till 9 PM on every working day. All hostels are equipped with Library, Internet center, sports facilities, book banks, etc.

Academic Programs Offered

NIST is affiliated to Biju Patnaik University of Technology, and is approved by Government of Orissa and All India Council of Technical Education (AICTE). NIST is a residential institute offering four-year B.Tech programs in the disciplines of Computer Science and Engineering, Information Technology, Electronics and Communication Engineering, Electrical and Electronics, Electronics and Instrumentation. It also offers a two-year Master of Technology (M.Tech) Program in Electronics and Communication Engineering with 18 seats and a three-year degree program in MCA with 60 seats. The institute has current student strength of around 1900.

R & D Activities at NIST

Thirteen faculty members have Doctorate degrees. More than five faculty members have post doctorate research work at different US and European Universities. Faculties include two BOYSCAST Scholars and two Fullbright Fellowships. The R & D activities is focused in the areas of Software Engineering, VLSI Engineering, Industrial Automation, Semiconductor Devices, Robotics, Intelligent Drives, CAD of Electrical Systems, etc. More than 10 workshops on recent topics have been held at the Institute. Faculties and students are actively involved in research with many publications in journals, conferences and semeinars, every year. More than 15 research scholars are working at the Institute, with a few of them having registered for Ph.D as well. Over 10 faculty members hold certifications from Oracle, Sun and CISCO.

NIST Technology Consulting Services (NTCS):

NIST Technology Consulting Services (NTCS) is an autonomous body of the institute actively involved in applied Industrial research, product prototype and development. It provides top class consultancy primarily in the area of IT to premier government and private organizations in the Healthcare, Education, Core Engineering Industries and Defense sectors. NTCS is committed to software development and training.

CNANCE Center: NIST has this unique credit of being selected as one of the few CNANCE (Center for National Academic Network for Continuing Education) by the AICTE. Under this program NIST, SunMicrosystem, and AICTE are offering short-term courses on advanced technologies to keep students/professionals globally competitive. The courses are primarily in the area of Java programming and Web technologies, and Database systems.

CCNA Local Academy: NIST is a Local Academy for CISCO Systems for its CCNA courses in Orissa, and is the only one in South Orissa and the second one in Orissa. The CCNA program is a four-semester program run by our CISCO certified faculty members. More than 50 students are currently enrolled in this program.

Center for Japanese Language Training: NIST is the second center in Orissa for Japanese Language Training as recognized by the Japanese Embassy. About 21 students have given their final certification examinations. Japanese Language classes are run throughout the year.

Extra Academic Activities

The value of extra academic activities is perfectly understood at NIST. The up-and-coming technocrats' minds are well worked up through numerous participations at national level seminars, workshops and conferences. The Students Activities Center has spread its wings with a number of adventure sports, gymnasium, sports facilities, cultural activities, yoga, multigym, etc.

Placement and Training

NIST has reason enough to be proud of itself for its remarkable track record of job placement success. Top notch companies such as Satyam, WIPRO, Infosys, IBM, TCS, PCS, HCL, Syntel, Kambay, Tata Steel, Integra Microsystem Ltd., IBM Global Services, CG-CoreEL, REISYS (USA), Patni Computer Systems, etc., have recruited trained technical students from this institute. More than 60% of the students have availed of campus placements since the last 4 years. NIST also arranges for specially designed summer training programs in top Engineering and IT industries in India. It also offers summer courses to students and working professionals in VLSI Design, Industrial Automation, JALP, CCNA, Japanese, and ORACLE at its NIST Excellence Center in Bhubaneswar, as well as at its Berhampur campus. For the purpose of facilitating 100% placement, the Institute offers specialized training programs using industry experts from India and abroad, in advanced technological skills applicable to industries worldwide, and courses on total personality development, competitive exams such as CAT, GRE, TOEFL, GATE, and Entrepreneurship.

Scholarships and Student Assistantship

Siva Sankar Bishoyi Scholarship: To commemorate the memory of our late student, Siva Sankar Bisoyi, who met a tragic accident on August 20, 2002, NIST is awarding a scholarship for Rs. 10000/- to one outstanding student based on MERIT cum MEANS criteria.

Scholarship for M.Tech Students: NIST is providing monthly scholarship of Rs 5000/- (to all GATE qualified students) and Rs 3000/- to all non-GATE qualified M.Tech students.

Post Matric Scholarship (PMS): Post Matric Scholarship (PMS) is one of the scholarships of Govt. of Orissa. This is a financial assistance for SC/ST students studying at Post-Matriculation stage to enable them to complete their education. Many NIST students got this scholarship.

Welfare Fund at NIST: As per recent Government of Orissa notification TTI-44/2003/15764 dated 9/9/2003, the operation of the WELFARE FUND is as per the following guidelines:

Only registered students of BPUT admitted during the academic year 2002-03 and subsequent batches will be eligible under the Welfare Fund scheme.

On death of father/financing guardian, the student concerned will apply to the Director in the prescribed format along with necessary documents.

The application will be processed through various stages in Institute & in BPUT.

On final approval, the student is expected to receive full financial support for all the remaining years of his/her study.

Economic Hardship: NIST is providing Economic Hardship Scholarship to the students from each batch. Each of the selected students gets Rs.500/ per month. Generally 5-7 students of each batch avail the facility.

Teaching Assistantship: Academically outstanding students of each batch are offered Teaching Assistantship amounting to Rs. 700/- per month. These students assist the faculty in the running of a course during a semester including grading of assignments, tutorials, etc.

Book bank facility: NIST is providing free book bank facility to 30 students of each semester. The selected students are getting all the books free in each semester.

The Social NIST

NISTians relate to the people and the issues of their development around them. They have been contributing to the cause of the affected people of the country in times of exigencies. NIST has contributed through NSS, NCC, Blood Donations and computer training programs for rural unemployed, and Berhampur jail inmates.

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