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K. J. Somaiya College of Arts, Commerce and Science, Kopargaon

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Key Indicator- 3.3: Research Publications and Awards

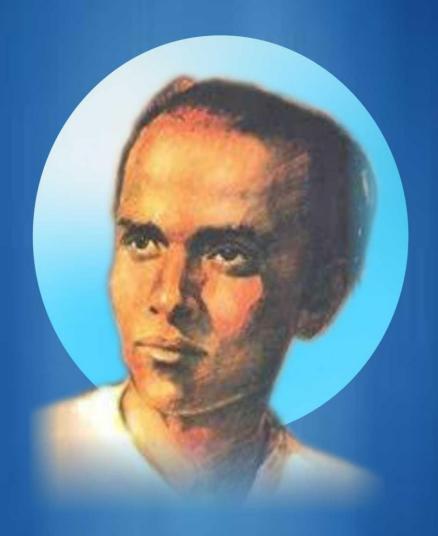
3.3.2: QnM: Number of books and chapters in edited volumes / books and paper published and papers published in national / international conference proceeding per teacher during last five years.

DVV clarification

Number of books and chapters in edited volumes / books and papers published in national international conference

2019-20

Literary Emperor Anna Bhau Sathe



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Literary Emperor Anna Bhau Sathe

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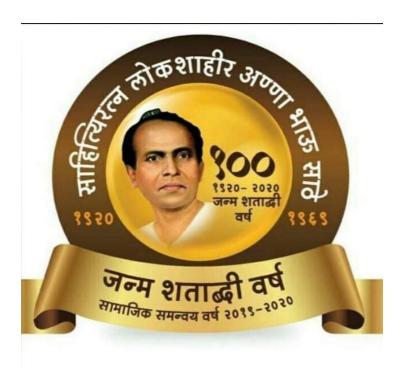
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Anna Bhau Sathe's Fakira: A Novel of Class Conflict

Prof. Vijay C. Thange

K. J. Somaiya College, Kopargaon

Anna Bhau not only chaired the first Dalit Literary Conference in 1958 but was also instrumental in organising the conference. He can be venerated as the precursor to the dalit literary movement. K. Cybil has complained that many critics and social scientists have trepidation to bring Sathe's name to the dalit camp because his strong links with the left. However, some of the scholars like Arjun Dangle, have acknowledged the contribution of Anna Bhau Sathe to the emergence and development of dalit literature. Dangale argues that the term 'dalit literature' can be traced to the first Dalit literary conference in 1958, which had also passed a resolution defining dalit.

Among the authors of our times, Anna Bhau Sathe, popularly known as Anna Bhau is most suitable for sharpening our understanding of the complex interplay of caste, class, religion and patriarchy in our society. Born in a dalit family in a small village in western Maharashtra on 1 August 1920, coincidently the day on which B. G. Tilak, one of the conservative leaders of India passed away, Anna Bhau faced a lot of miserable problems like untouchability, hunger, illiteracy, humiliation and poverty.

Every author is inevitably a product of the age and the society in which s/he lives. There is a general belief in Marxism that it is the material class that determines individual consciousness. Marxist literary criticism maintains that a "writer's social class, and its prevailing ideology have a major bearing on what is written by a member of that class." However, in India, it is caste, a category and social institution distinctly different from class, also contributes to the shaping of consciousness. However, Anna Bhau succeeded in transcending the limitations of caste and delineated the characters representing various downtrodden castes, tribes, working class and women.

Anna Bhau Sathe is one of the few writers who practised such a large number of forms of literature as story, novel, play, poetry, song, travelogue, ballad, script writing, etc. Moreover, he dealt with the issues which were non-issues for the traditional writers. Poverty, exploitation, prostitution, economic inquality, gender discrimination, slum dwelling and illiteracy are the common themes in his writings. All the characters in his novels are extremely political. His colleague D. T. Gavhankar has informed us that all the political ballads that Anna Bhau wrote as part of the political campaigns initiated by the peasant / working class movement, communist movement or the samyutka Maharashatra movement.⁵ He also was a theatrical artist who wrote as well as performed on the stage. He improvised the term Loknatya, political theatre committed to people's movement. His contribution to the development of Loknatya came at the very adverse times and changed the notion of folk drama as well as the course of politics. He was the first significant writer to assign to a dalit woman central role in a novel. His play *Inamdar* (1951) deals with exploitation of the landless workers and his novel *Vaijayanta* deals with the exploitation of women under capitalism. His plays are strategically located in the wider communist ideology of the liberation of the peasants and the working class.

Emergence of Anna Bhau as a politically awakened writer became possible only after he went to Mumbai and became part of revolutionary fervour of the communist movement. Many of his biographers inform us that it was not so easy for a slum-dweller illiterate boy to transform himself into a revolutionary artist. After listening to a political speech delivered by Krantisinh Nana Patil, a legendary hero of the armed struggle against the British rule and indigenous feudalism, Anna decided to join the freedom movement and then *Lal Bawta Kalaa Pathak* (Red Flag Art Troupe), part of a cultural wing of the Communist Party of India, which was, in fact, quintessential form of political theatre.⁶

Anna Bhau was the first ever communist writer to write a song on the life-message given by Dr. B. R. Ambedkar. This song appeared at a time when Ambedkar had clearly distanced himself from the communist movement.

Anna Bhau Sathe is one of the most courageous writers ever Marathi literary world could have. He says, "This is the false freedom, the majority of countrymen are hungry". He was one of the inspired writers from the charismatic leadership of Dr. Babasaheb Ambedkar. Anna Bhau Sathe was self educated literary don who could bring about the change in perception of dalit life. He was closely associated with down trodden people. Anna Bhau started writing sometimes in 1942. Initially, he wrote folk songs, ballads, songs on the lives of farmers and labours. Through the *Lal Bawta Kalaa Pathak* (Red Flag Art Troupe) he gave a new dimension of class struggle to folksongs in *tamasha*. Anna Bhau's friends from Communist Party of India helped and encouraged him to write. He firmly believed that literature is the means of social revolution.

Anna Bhau Sathe in his introduction to the novel *Vaijayanta* says, "The writer who concerns society, society concerns such writers. This thing I bear in my mind while writing. I believe in the people of my country and their struggle. Everyday I see a lofty dream of prosperous country and just society. I dream a paradise in Maharashtra everyday." In this introduction, he further states that the earth does not rest on the head of king cobra (as traditionally believed in Hinduism); but on the work and strength of dalits and working class people.

As per available records, Anna Bhau Sathe wrote 40 novels. Fakira (1959) is his masterpiece which depicts the deplorable condition and social periphery of the dalits. Action in Fakira takes place in Vategaon in Sangli district of Maharashtra. It has got rural setting. Shankarrao Patil of Vategaon is rather jealous of the nearby village called, Shigaon. The jogini¹⁰ is a symbol of pride for that village and it gives the right to them to celebrate yatra. Shigaon has the possession of jogini with them. Shankarrao Patil secretly reveals his thoughts to Ranoji, young and energetic matang man, of taking back of jogini to Vategaon. But also laments the inefficiency of the people of Vategaon to get back the jogini. Ranoji is the father of Fakira, the hero of the novel. On the day of the yatra of Shigaon, Ranoji plans to get back the jogini. He informs only Vishnupant, an

uppercaste, and Shankarrao Patil. Ranoji somehow enters the vigilant mob around the jogini and manages to kill the person with whom was the custody of jogini. He runs away in the darkness of the night but unfortunately gets caught in the area of Vategaon. Ranoji was killed against the tradition of not killing the person in the area of another village. His favourite 'gabrya' horse also gets killed by the people of Shigaon. The result is the unity of Vategaon people and subsequent gathering in *Matangwada*, the neglected place in social set up. After this incident. Fakira takes over the situation. He is far better than his father, muscular and the great warrior. He is burning with the vengeance and waiting for the appropriate situation. The youths from Shigaon are now desirous to get back jogini and plans attack on Vategaon's vatra. Fakira had an inclination of the possible attack and prepares to retaliate. Accordingly there is an attack and Fakira faces it successfully. Not only he manages to keep jogini with Vategaon, but chases the youth outside of Vategaon. Instead of killing the youth, Fakira cuts his hands from wrists. Thus, by saving the life of that youth Fakira becomes the hero.

The novel also demonstrates the indomitable spirit of Fakira and his inspiration to other downtrodden people. He takes up the cudgels against Britishers and fights for the rights of *mang*, *mahar* and *ramoshi* community people. He fights not only against the British but also against some of the upper caste country men like Raosaheb Patil and Bapu Khot. When Uma Chaugula, Dada Patil, Raosaheb Patil and British government contrive against Fakira, he defeats them. Fakira and his wife were insulted by Raosaheb Patil. Fakira reacts against this insult very furiously by beating up Raosaheb Patil brutally and shows the depressed community not to bear the injustice of the upper caste people.

The novels like *Vaijayanta* (1959), *Chitra* (1951), *Chandan* (1967), *Varnecha Wagh* (1968), *Varnechya Khoryat* (1951) and *Vair* (1964) also depict the caste, class and gender conflict very vigorously. The unity of the depressed classes and their fight against established social setup is predominantly portrayed in the novels of Anna Bhau Sathe. They fight against the injustice and become the role models for others. *Chandan* is the realistic picture of the slum area of

Narayannagar. Warnecha Wagh and Makidicha Mal (1963) are the novels describing the wretchedness of poor and exploitation of lower caste people. Vaijayanta describes the deplorable condition of a tamasha dancer called Vaijayanta. These characters are not just victims of exploitation and injustice, but they initiate active protest against them.

Anna Bhau Sathe describes the characters in his novels from almost all the strata of society. He throws light on women's issues and their exploitation, poverty, the indomitable spirit of lower caste people for their survival, wretchedness of the poor, etc. Class conflict is very dominant in his novels. Anna Bhau Sathe, being a dalit, had experienced all the glitches of poverty, starvation, exploitation and untouchability. Despite having communist outlook towards the social set up, he is also in dilemma to comment on the issues of caste conflict effectively in his writings. Being a communist, Anna Bhau Sathe frames his protagonists in the class hierarchy and such heroes and heroines fight against the class dominance, but these characters fail to fight against the caste hierarchical structure and its dominance.

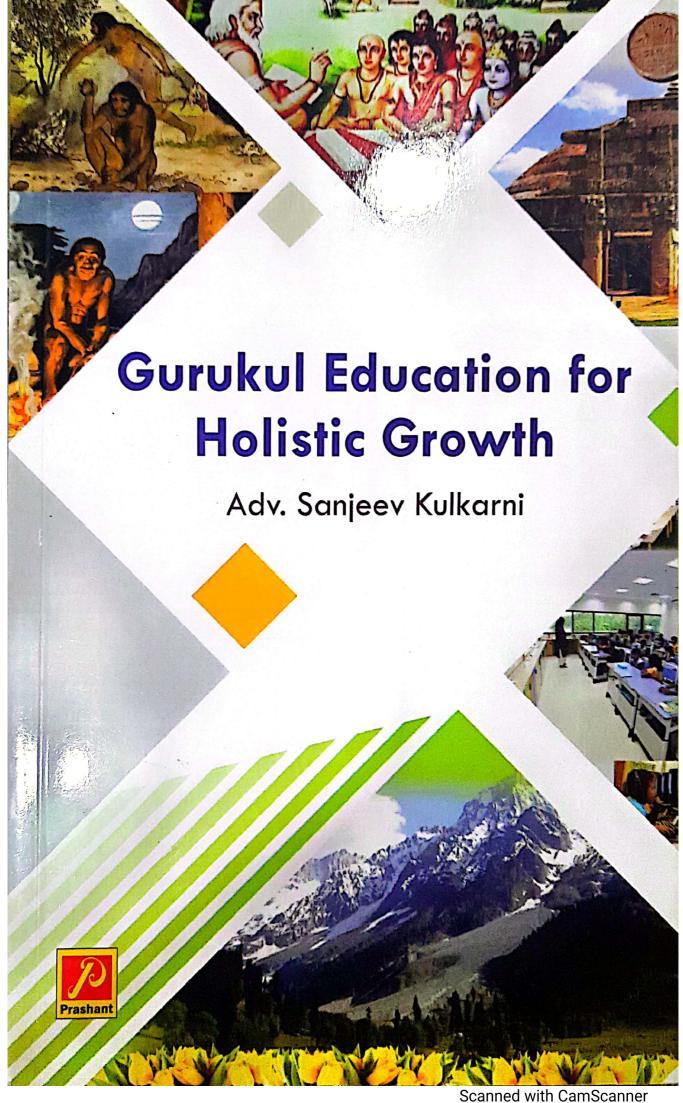
The important characteristic of the novels of Anna Bhau Sathe is that they are realistic to core. He describes the sufferings of the people more vividly and forcefully. He appears before us as an uncompromising critic of the whole class of the perpetrators of injustice and cruelty. Every novel of his seems to have been designed by him to arouse the social conscience. There is hardly any ugly or depressing aspect of Indian socio-cultural and patriarchal life which has not been attacked by Anna Bhau Sathe in his novels. Anna Bhau Sathe's misery of wretchedness in slum areas caused by poverty is most vivid and poignant. He can be seen as a leading practitioner of the novel of protest in India.

The emergence of Anna Bhau as an icon is a posthumous phenomenon. Not much was available about this writer before the scholars like Baburao Gurav and Bajrang Korde¹² took to writing on Anna Bhau, i.e. more than almost two decades after his death. His novels aim at denouncing social evils of all kinds and it is this aspect of his fiction which has won him the esteem and admiration worldwide. Moreover, he makes the readers aware of socio-cultural

aspects of the life reflected in the novel and enhances their ability to understand, interpret and appreciate the fictional works in general and the novels in particular.

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- 8) A cultural programme of folk songs and folk plays
- 9) Baburao Gurav, 'Anna Bhau Sathe Samajvichar Aani Sahitya Vivechan (Lok Wangmaya Gruha, Mumbai, 1991), p.8
- 10) A small yellow coloured bowl
- 11) A village fair
- 12) Bajrang Korde, *Anna Bhau Sathe* (New Delhi: Shitya Akadami, 1999)



Gurukul Education for Holistic Growth

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Effective Pedagogical Approaches

Vijay C. Thange

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Introduction

Pedagogical approaches are very instrumental in learning of the students in classroom. Those who are keenly interested in the teaching-learning process should strategically plan a variety of pedagogical approaches for the effective learning. The drudgery of learning can be wiped out with a correct pedagogical approach in teaching by the teachers. If the material being taught and the education itself have the utilitarian value, the students will definitely take interest in learning. It is the duty of the teachers to believe in the capacity of their students for learning and accordingly they have to thoughtfully utilize a range of pedagogical approaches for ensuring the learning pedagogy and its forms.

Pedagogy refers to the "interaction between the teachers, students and the learning environment tasks." The two major approaches of pedagogy are teachers-centered and learner-centered pedagogy.

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Infact these two approaches seem contradictory to each other. But they are not. for the effective learning outcomes, a judicious combination of both the approaches should be executed in learning. Teacher, centered approach should complement learner, centered approach for better learning of the students.

Lecture method, rote learning, chorus answers are some of the methods in teacher-centered pedagogy. In this approach, the students remain mostly inactive and they are afraid of teacher. This approach is often criticized. However, lecture method can be effective when teachers frequently ask questions to students and elaborate key ideas and concepts to the students.

Learner-centered pedagogical approach includes student centered, participatory and active learning methodologies. They remain facilitator in this process and create conducive atmosphere for learning. In recent years, considerable research and advocacy has promoted learner-centered pedagogy for economic, cognitive and political reasons.3 But the shifting from teacher-centered approach to learner-centered approach becomes herculean task for the teachers.

So, I would suggest learning-centered pedagogy which is relatively new term in the field of education. This approache acknowledges both learner-centered and teacher-centered pedagogies and also give liberty to teachers to consider the local context, including the number of students in the class, the physical

environment, the availability of teaching and learning materials, etc4. This approach advocates that teacher should remain flexible and carefully they should adapt their pedagogical approaches based upon their school/college environment.5

Ideally speaking, effective pedagogy should lead to the following outcomes:

- 1) Academic achievement.
- 2) Social and emotional development.
- 3) Acquisition of technical skills.
- 4) General ability to contribute to society

These learning outcomes are observable and measurable in terms of knowledge, skills and attitudes.

It is assumed that teacher must have the mastery over subject content and the language in which he/she is delivering the subject content. Infact teaching is an art and I am quite sure that it can be developed. Teacher -behavior is modifiable and effectiveness of the teachers can be developed through consistent efforts. In this regard, feedback devices can be very effective in inculcating desirable teaching skills and competency among the teachers.

At the end of my article, I would say that teachers should have a sound knowledge of the nature, needs, interest, capacities and limitations of his students. Teacher should thoroughly understand that learning is a continuous process and the participation of students must

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be taken into account in teaching-learning. A teacher should remain more facilitator, a counselor, a guide, a co-worker and a friend rather than a mere teacher.

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Revised Accreditation Framework of NAAC

Some Issues and Perspectives

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The Quality Sustenance through Academic and Administrative Audit

- Prof. V. C. Thange, Coordinator IQAC, K. J. Somaiya College of Arts, Commerce & Science, Kopargaon

Abstract:

Academic and Administrative Audit (AAA) is a structure to organize and maintain high standards in the ground of Higher Education. It plays vital role in providing quality education to the learners all over the world. In addition to the developed countries, even the developing as well as underdeveloped countries, are now-a-days coming forward in opting the AAA. It is a continuous process of self-introspection for the better growth of the institution. The present paper proposes to focus on the strategic evaluation of AAA for quality assurance in the HEIs.

Key Words and Phrases: Academic and Administrative Audit (AAA), Quality, Higher Education, Policy and Process of Education.

Introduction:

Academic audit is a process which assures all stakeholders in higher education that the institution has adequate and proper mechanisms to assure the quality and safeguard the standards of their educational needs. It is concerned with an evaluation of the way in which quality and standards are assured by instructions in the context of a commitment to continuous quality improvement. It provides public information on the soundness of an institution as a provider of the qualifications of national and international credibility as well as producing high quality research and providing services to support the social and economic development of the

It proves to be quite fit for purpose in advancing the institution's mission and goals and successfully deals with multi-

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faculty transformational challenges not only for the development of students but for the requirements of their social and economic development also. It also verifies institutions' management of the quality of their inherent academic activities in a manner that is fit for purpose in advancing the institution's objectives. It also provides security of the systems supporting the institution's qualifications-awarding work along with balancing the need for public credibility and independent and rigorous scrutiny. In short it encourages institutions to be self-evaluative and at the same time offers opportunities for enhancement of academic management of standards and quality. Former President and great scientist late Dr. A. P. J. Abdul Kalam said, "A developed India by 2020, or even earlier is not a dream. It need not even be a mere vision in the minds of many Indian. It is a mission we can all take up and succeed." Indeed nation building is a collective and cooperative process with honest and transparent approach in each and every aspect of various sectors.

Academic and Administration Audit (AAA) is the recent practice to evolve clear and transparent and yet authentic and systematic approach towards various steps of progress in the development of a particular institution and ultimately nation. On account of rapid changes, global competitive atmosphere and smarter human skills have driven organizational operations attracting renewed attention to the concept of 'audit'.

Scope of Academic & Administrative Audit:

The term 'audit' is Latin, which means 'he heard'. In other words, the student has completed the teaching process but has not been awarded any particular grade. The purpose of academic audit is to evaluate an institution's policies, systems, strategies and resources for quality management of teaching and learning, research, knowledge throw, guidance and consultancy and community services using the prescribed audit criteria. It is also concerned with outcome standards of teaching and research.

AAA is actually about facilitation of excellence in higher educational institutions by the stakeholders of higher education primarily by the teachers, management and community as well.

Same Very of NAAC: Some Issues and Perspectives | 81

The objective is the philosophy of mutual trust through building a nudit system to carry out academic audit of L. 84 The objective is the purposely with greater focus on issues roll of higher education institute purposely with greater focus on issues related to the outcome of particular institution. No doubt, auditing academic institutions is the need of an hour.

This process should be based on definite periodic intervals, Through mutually reinforcing system of institution-based quality assessments of teaching and learning and a coordinated regional system of external academic audits, quality assurance can be the prominent feature in higher education. The commitment to quality assurance in higher education through the continuous improvement of teaching and learning processes lies at the heart of the academic audit. Many institutions wish to ensure the best academic programme quality by proactive and systematic planning of renewing their existing resources and they re benefitted by the process of AAA.

Any institution scheduled for academic audit has to prepare a document based on certain guidelines setting out their approach to managing the quality and standards of their academic work including teaching and learning, research, consultancy, knowledge transfer and community engagement in line with the particular and specific vision and mission of their Institute. Academic audit, like more traditional programme review processes, is an academic auditor process including a self-study and a site visit by peers from outside the institution. The Academic Audit process emphasizes self-reflection and self-improvement rather than compliance with predetermined standards. The purpose of an academic audit is to encourage departments or programs to evaluate their "Education Quality Processes" - the key faculty activities required to produce, assure, and regularly improve the quality of teaching and

An academic audit asks how faculty approach educational decision making and how they organize their work, using the resources available to them and working collegially to provide a quality education in the best interests of the discipline and student learning. There are substantial reasons to conduct academic

audit. To assess the overall academic work of academicians and supporting units is the prime objective of AAA. Public institutions are directly funded by Governments and their effectiveness is necessary for continuous financial funds which are guaranteed by auditing. Besides one of the most important assets institutions display to attract students is whether they are accredited or not, which validates their degree upon graduation. This process of accreditation also required auditing of all academic and non supporting units regarding their efficiency for standards. Academic audit is the preparation and submission of a brief report- a self evaluation of the ways and extent to which the institution assures and enhances the quality of its provisions. In preparing their self evaluations, institutions should also consult relevant Government policies including those on higher education, and strategic planning guidance issued from time to time by different governing bodies for Higher Education.

Audit is an educational term used for the completion of a course of such study for which no proper evaluation or assessment of the performance of the student has been done on any scale of judgement.

Quality management includes arrangements for quality assurance, quality support and quality enhancement, and covers aspects of input, processes and outcomes. Academic audit requires assessing an institution's capacity for quality management of its academic activities in a manner that meets its specific mission, vision, goals and objectives, and meets appropriately with various expectations and needs of society and public in general. Sometimes this technique is used by individuals who want to complete a specific course without the risk of lower grades or the tag of average or below average etc.

Academic and Administrative Audit is related with Total Quality Management (TQM) in which Quality management entails a number of institutional planning and other action to address issues of quality and standards such as quality assurance, quality support, quality development, and enhancement and quality monitoring regarding policies, systems, strategies and resources used by the institution to satisfy, sustain, develop enhance, support,

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to review, monitor and act on quality requirements and standards. The technique of Academic audit may be helpful for assessing a lower confident group of students and also in case of beginners or for newly introduced subjects. Academic audit should be an evidence-based process carried out through peer review and assure Quality Assurance Framework. It is mostly concerned with the way in which higher education institutions exercise their powers as degree -awarding bodies, and each review should results in a report that sets out the degree of confidence that may be reasonably be placed in the provider's ability to assure and enhance the quality of its provision and safeguard the standards of its awards in line with the requirements of the qualifications set-up.

The Academic Audit should be based on reviewing and assessing the processes and activities of the institute regarding its initiatives for improvement and that progress on those initiatives have been tracked. Further, it is expected that the results of those implementations have been considered and used to further improvement in the program. It covers all the educational provision for which the institution is responsible. It is also concerned with the ways in which the institution assures the quality and standards of research undertaken by academic staff, consultancy and other knowledge transfer services offered by the institution and community service undertaken. Subject review can also be undertaken to judge the quality of student learning experience, the learning outcomes they are supported in achieving and the graduates are both fit for purpose and internationally credible.

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Some Issues and Perspectives

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Global Perspectives of Higher Education

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Introduction:

India is a rapidly changing country in which inclusive quality education is of utmost importance for its future prop The country is currently in a youth bulge phase. It is largest youth population in the world—a veritable army million young people under the age of 25. Fully 28 perothe population is less than 14 years of age, and with more 30 babies being born every minute, population growth rate expected to remain at around 1 percent for years. India is exp to overtake China as the largest country on earth by 2022 grow to about 1.5 billion people by 2030 (up from 1.34 bill 2017). The UN projects that Delhi will become the largester the world with 37 million people by 2028.

This demographic change could be a powerful engine economic growth and development: If India manages to moder and expand its education system, raise educational attains levels, and provide skills to its youth, it could gain a significompetitive advantage over swiftly aging countries like Chim

According to the World Bank, India succeeded in brit 133 million people out of poverty between 1994 and 2012, extreme poverty continues to decline drastically. However, still has about a quarter of the world's extreme poor, and so inequalities in the country are not only rampant but rising current trends continue, India will be in danger of disintegra into parallel societies with economic realities of elites in economic centers like Mumbai or Bangalore looking exceedingly differ from those of the impoverished masses in underdeveloped st Uttar Pradesh or Bihar. As economists Amartya Sen and Jean Uttar I in a famous quote, India is looking "more and Jean prèze put it in a famous quote, India is looking "more and more lands of California in a sea of sub-Saharan Africa " Drèze put le California in a sea of sub-Saharan Africa."

In light of such problems, it remains very much an open In high whether India can harness its youth dividend to achieve question will dividend to achieve inclusive economic development, or if it will become overburdened by population growth. As of now, India struggles to educate and by population: More than 27 percent of the employ to a good are excluded from education, employment, or raining, while the overwhelming majority of working Indians are employed in the informal sector, many of them in agriculture, often in precarious engagements lacking any form of job security or labor protections. It has been estimated that India's economy needs to create 10 million new jobs annually until 2030 to keep up with the growth of its working-age population—that's more than 27,000 jobs each day for the next 12 years. While that's not impossible—China reportedly created 13.14 million new jobs in its cities in 2016—it's certainly a tremendous challenge. Between 2013 and 2016 India's economy only generated an estimated 150,000 to 400,000 jobs each year. In one stark example of the dire labor market situation in present-day India, 2.3 million applicants applied for 368 open government positions in the state of Uttar Pradesh in 2015.

India's higher education system, meanwhile, does not have the capacity to achieve enrollment ratios anywhere close to those of other middle-income economies. The country's tertiary gross enrollment rate is growing fast, but remains more than 20 percentage points below that of China or Brazil, despite the creation of large numbers of higher education institutions (HEIs) in recent years. Educational attainment in present-day India is also not directly correlated to employment prospects—a fact that raises doubts about the quality and relevance of Indian education. Although estimates vary, there is little doubt that unemployment is high among university graduates—Indian authorities noted in 2017 that 60 percent of engineering graduates remain unemployed, while a 2013 study of 60,000 university graduates in different disciplines found that 47 percent of them were unemployable in

challenge for Indian policy makers.

Incredible India:

A Few Facts about a Highly Diverse Country with a Difficult Modern India has been shaped by centuries of European past Moder and colonialism, most notably the formal colonial rule imperialism which governed almost all of present-day India, by Great British and Bangladesh during the 19th century. Perhaps the pakistan, and pa most destrict destrictions by defining communities based on religious identity and divisions by Indian subcontinent into administrative units along divided the divided the divided present-day Bangladosh and Muslim-majority Pakistan which then included present-day Bangladesh) were eventually which independence in 1947 as separate sovereign countries an event that was marred by horrific sectarian violence and mutual genocidal mass killings between Hindus, Muslims, and Sikhs. An estimated 200,000 to two million people were killed; between 10 million and 20 million people fled and migrated between the newly created countries, or were forcefully displaced in one of the largest dislocations of people in modern history.

This tragedy was perhaps the most defining moment for contemporary South Asia. It antagonized Hindus and Muslims and placed India and Pakistan on a hostile footing ever since, resulting in three separate wars and a nuclear arms race between the two countries. The conflict over the disputed territory of Kashmir continues to be a constant source of tension and military confrontation today. Of course, India remains a land of colossal proportions despite the partition. The country is, in a word, vast-it's the world's seventh-largest in terms of geographical area, stretching from the southern plains of Kerala and Tamil Nadu to the snow-capped Himalayas in the north. India borders Bangladesh, Bhutan, China, Myanmar, Nepal, and Pakistan and features some of highest mountains on earth, the huge Thar Desert, 4,300 miles of coastline, and the famous and religiously important Ganges River. It has 36 states and territories, the largest of which are Uttar Pradesh (home to an estimated 219 million people) and Maharashtra (with approximately 119 million). To put it differently, India is a place where one individual state has more people than Pakistan or Nigeria, the world's sixth and largest countries in terms of population size.

Future Growth Potential and Factors Affecting Outbook
Student Mobility:

Notwithstanding the high number of Indian internal students around the globe, India actually has a very low outbout student mobility ratio of only 0.9 percent. Merely a tiny free of the country's 36 million tertiary students is currently abroad, which means that there's enormous long-term potentiary for further growth. While overall momentum in outbound mobile is slowing in countries like aging China, where the quality universities has matured and the benefit of a Western education Chinese students has decreased, India's burgeoning population will continue to face much more Darwinian challes in securing access to quality education for years to come.

There is consequently a strong relationship betwoodbound student flows and macroeconomic conditions. Betwoe 2011 and 2013, outbound students flows decreased drastical when India suffered a severe economic downturn and the India rupee depreciated by 44 percent against the U.S. dollar, making it much more expensive for Indians to study abroad. Fundamental prospective international students waited out the crisis at homeatrend clearly illustrated in the graph above.

Trends in the United States:

The number of Indian students in the U.S. has more the tripled since the beginning of the 21st century and grown rapidly as of recently. According to IIE's Open Doors data, the number of Indian students reached its highest peak ever in 2016/17, when it spiked from 165,918 students in the previous academic year to 186,267 students—an increase of 12.3 percent.

However, it is highly unlikely that such growth rates can be sustained in the current political climate in the United States Enrollments have already slipped—data on active student visas provided by the Department of Homeland Security (DHS) show that the total number of student visas in the F and M category held by Indian students dropped by 0.27 percent between December 136 Prashant Publications

March 2018, following a decrease of 28 percent in new pol⁷ and being issued to Indians in 2017.
Flyisas being developments receive in

These developments receive intense media coverage in India These devel These devel These devel affect the inflow of Indian Students in Indian students. It is a well common for Indian students to work on OPT and the inflow of Indian students. It is will almost on Indian students to work on OPT extensions relatively control of the control of Indian students are graduate students, while undergraduate Indian students make up only 11.8 percent. A large majority, 71.6 percent, students make up only 11.8 percent. A large majority, 71.6 percent, alled in STEM fields, mostly engineering Indian andents marked in STEM fields, mostly engineering. India has the share (36.2 percent) of engineering students are is enrolled in (36.2 percent) of engineering students among the top highest share countries except for Iran. Notably, fully 30.7 percent of indian students are currently on OPT. Student surveys have shown Indian students of international students considering the that a sizable chose another destination because of limited work opportunities—a situation that caused the UK to ease restrictions gin in 2017 for select countries, excluding India.

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REVISED ACCREDITATION FRAMEWORK OF NAAC:

SOME ISSUES AND PERSPECTIVES

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Role of NAAC: A Quest for Excellence in Higher Education in India

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Abstract:

Educational system in India is the largest and diverse in the world affected by privatization, widespread expansion and increased autonomy, introduction of new programs accessing to higher education. NAAC is an autonomous institution established by the UGC with the prime agenda of assessing academic institutions with all objectives to improve the quality of higher education. It is an attempt to restore the standards of the higher education. The quality is defining element with continuous evaluation which promotes the academic environment. Globalization has influenced systems of higher education in India and such changes formulate the core values of NAAC. It is a contribution to nation building and skill development of students and institutions into the centers of excellence. The purpose of this research paper is to focus upon the role of NAAC in ensuring the quality in defining the element of Higher Education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives.

Keywords: NAAC, Higher Education, Increased Autonomy, Academic Environment etc.

"Education according to Indian tradition is not merely a means of earning a living; nor is it only a nursery of thought or a school for citizenship. It is initialization into the life of spirit and training of human souls in the pursuit of truth and the practice of virtue" – Dr. S. Radhakrishnan

NAAC was established in 1994 as a response to recommendations of National Policy in Education (1986). This policy was to "address the issues of deterioration in quality of

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education", and the Program of Action (POA-1992) laid out strategic plans for the policies including the establishment of an independent national accreditation body. Consequently, the NAAC was established with its headquarters at Bangalore. The NAAC functions through its General council (GC) and Executive Committee (EC) where educational administrators, policy makers and senior academicians from a cross section of the system of higher education are represented. The chairperson of UGC is the president of the GC of NAAC, the chairperson of EC is an eminent academician.

Higher Education: Aims and Objectives

The word education is derived from Latin word educatio- a bringing up. Educational system is the emblem of progress in any country. Educational system in any country cannot flourish without quality and higher education is no exception to it. NAAC's assessment can judge the quality of a college or a university, it is expected that NAAC's assessment will lead to the qualitative up gradation.

Quality of Higher Education plays a vital role in the students' career and employability. Higher education plays an essential role in society by creating new knowledge, transmitting it to students and fostering innovation. Research-based education has lately received increasing interest both among researchers in higher education. Throughout the world, Higher Education Institutions (HEIs) function in a dynamic environment. Indian Education system is going through the marked changes necessitated by the need to expand the systems of higher education, impact of technology and globalization and increasing privatization. The HEIs have remarkable potential to adapt changes according to the changing society. This is a contribution to national development. These institutions have major role in human resource development, economy and society as a whole.

The use modern tools and technological advancement in educational transactions have to be undertaken by all HEIs, to make a visible impact on academic development as well as administration. NAAC accreditation focuses on how institutions have put in place their electronic data management systems and

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their access to stakeholders.

NAAC includes in its scope of assessment, skill development of students on par with their counterparts, consequently the demand for internationally acceptable standards in higher education is evident. Therefore the accreditation process needs to examine the role of HEIs be innovative, creative and entrepreneurial in their approach to ensure competitive skill development among students. These requires institutions to be innovative, creative and to achieve this, institutions may establish collaborations with industries and networking with the neighborhood agencies.

NAAC also focuses on inculcating value systems among students. It examines how the values are being inculcated in the students by HEIs. In India with cultural diversities and pluralities it is essential for students and institutions to imbibe the appropriate values relevant with social, cultural, economic and environmental realities at the local, national and universal levels. NAAC promotes the institutions for the excellence in all spheres which contributes the overall development of the systems of higher education in India.

Outcomes of Assessment by NAAC-

- In the process of NAAC, self study report is the key aspect which eventually helps the institutions to recognize its strengths, weaknesses, challenges and opportunities.
- Assessment by NAAC develops the changes in teaching learning policies of institutions which is upgrading according to the need of time.
- Institutions are compelled to reform the teaching, learning and evaluation process which was traditionally teacher-centered. On the contrary, now it is learner or student centered. So, the modern techniques of teachinglearning are initiated.
- NAAC has developed up gradation and transparency in governance.
- NAAC promoted the participation of Alumni and Parents Association through feedback mechanism for enhancing the quality of the institute.

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- NAAC motivated research related activities, research projects, research publications, and use of research laboratories.
- NAAC has given the importance to infrastructural developments in institutions which include wellequipped classrooms and labs, library, hostel, staffrooms, digitization of offices and ICT facilities.

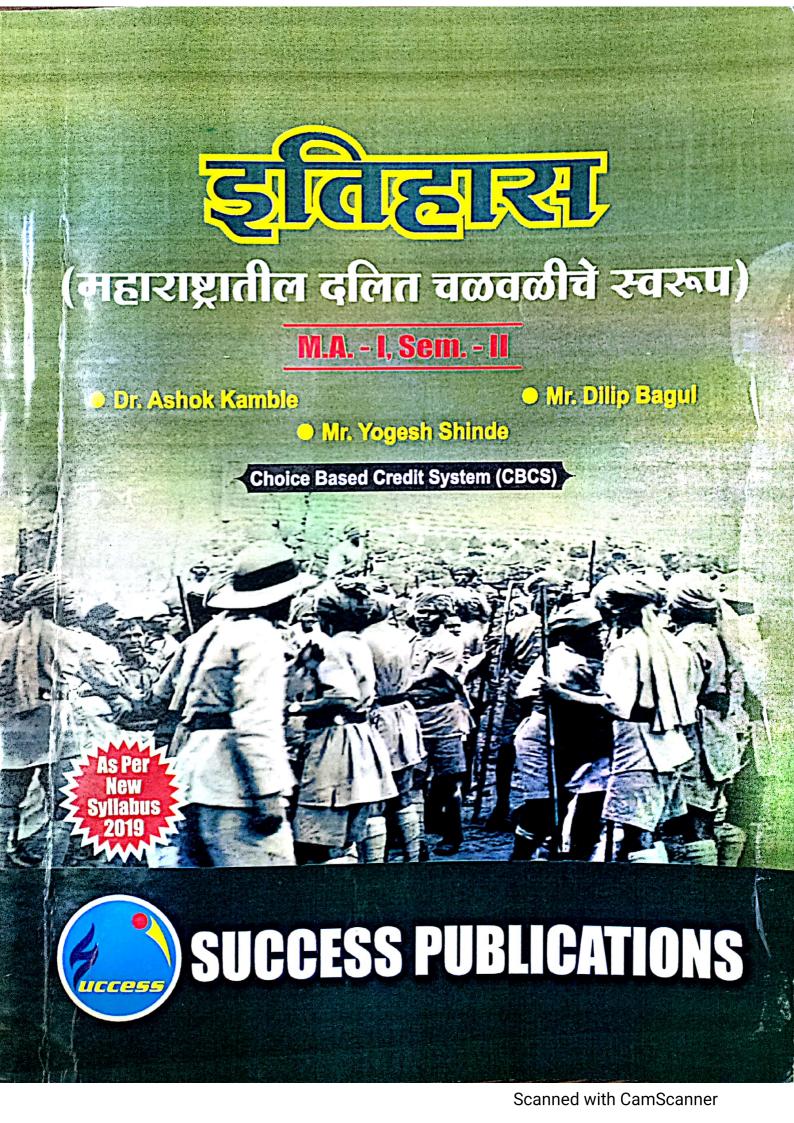
These outcomes are representative of the larger part which is beyond words to be shortlisted.

Conclusion

To conclude we can say that the assessment by NAAC takes a holistic view of all inputs, processes and outcomes of institutions and thus, the HEIs are expected to demonstrate the achievement of objectives. NAAC accreditation is playing a major role in Ensuring Quality in Higher Educational Institutions and Universities. The institutions with NAAC Accreditation should not aim at just getting higher grades, but should Aim at quality education in real sense which would in turn help in building a strong, qualified and highly motivated young team India that can assist in Nation Building.

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शावित्रीबाई फुले पुणे विद्यापीठाच्या जून २०१९ पासून सुरू झालेल्या एम. ए. च्या इतिहास (महाराष्ट्रातील दलित चळवळीचे स्वरूप - HS-O12) या विषयाच्या अभ्यासक्रमासाठी व इतर विद्यापीठांच्या संबंधित अभ्यासक्रमासाठी उपयुवत पुस्तक

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संपादक

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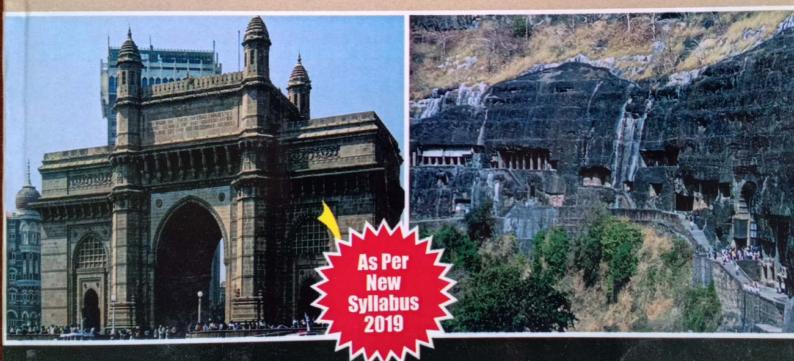
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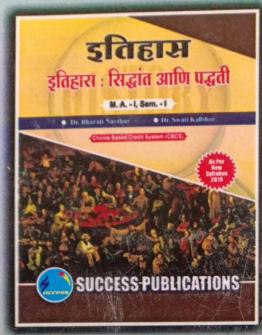
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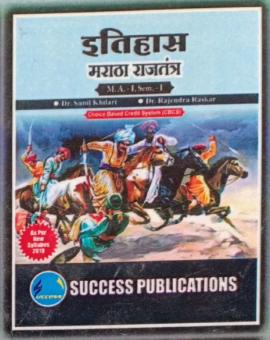
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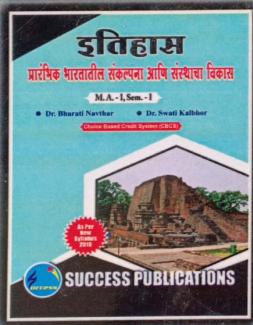
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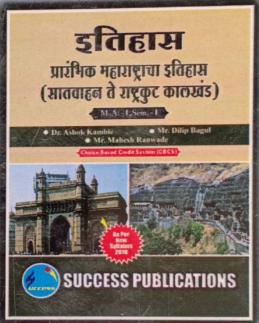
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INDIA'S FOREIGN POLICY

Dr. Vilas Awari

India's foreign policy has always regarded the concept of neighbourhood as one of widening concentric circles, around a central axis of historical and cultural commonalities. The guiding national interest. The study of The Foreign Policy of India' has so far been confined to India's relations with particular countries and areas. Very little attention has generally been paid to the more fundamental problems or issues. The study of basic determinants, basic principles has been largely ignored not only by politicians and journalists, but even by scholars specialised in India's Foreign Policy. The study of The Foreign Policy of India' has so far been confined to India's relations with particular countries and areas. Very little attention has generally been paid to the more fundamental problems or issues. The study of basic determinants, basic principles has been largely ignored not only by politicians and journalists, but even by scholars specialised in India's Foreign Policy. Indian foreign policy since the end of the Cold War, India is still far from fulfilling its long cherished dream of "great power" status in the contemporary international system. This is because of an unclear foreign policy framework and the absence of a sound and effective strategy—a method for utilising cultural, economic, military, political, scientific-technological and social developments as inputs of power for advancing and pursuing national interests. India's foreign policy seeks to safeguard the country's enlightened self-interest. The primary objective of India's foreign policy is to promote and maintain a peaceful and stable external environment in which the domestic tasks of inclusive economic development and poverty alleviation can progress rapidly and without obstacles. This book will provide useful reading and reference material for academicians, policy makers and students of political science

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Dr. Vilas Awari has been working for last 29 years in K. J. Somaiya College, Kopargoan. He has done Ph. D. on India-SAARC Relationship from TilakMaharashtra University, Pune. Presently, he is research guide for M.Phil and Ph.D. degree in SavitribailPhule Pune University (SPPU). He has authored, Coauthored and edited more than 17 reference books. He has published 22 research papers in International and National level research journals. He is lifetime member

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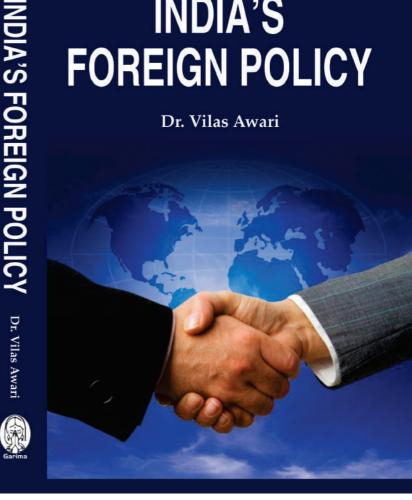


GARIMA PRAKASHAN



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International Relations

the interactions between nations was considered an essential part of statecraft. India's international relations reflect a traditional policy of non-alignment with its emphasis upon international peace, peaceful coexistence and independent foreign policy, which have been helpful for India in securing its national interests as well as in building up an influential position in world politics. International relations attempts to explain the interactions of states behavior originates within one country and is targeted toward members of other countries. In short, the study of international relations is an attempt to explain behavior that occurs across the boundaries of states, the broader relationships of which such behavior is a part, and the institutions private, state, nongovernmentar, and intergovernmentar) that oversee those interactions. This book chronicles the complex relationship between international law and the Third World, during the twentieth century. It does so by suggesting that it is impossible to obtain a full understanding of this complex relationship unless one factors in two phenomena: first, a focus on development discourse as the governing logic of the political, economic, and social life in the Third World; and second, an appreciation of the role of social movements in shaping the relationship between Third World resistance and international law. This book can be useful for the students of political science, politician, the

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International Relations



Dr. Vilas Awari

PUBLIC ADMINISTRATION

Dr. Vilas Awari

out the business of government. In the context of the growing popularity of governance as a new paradigm of public administration, collaborative governance has gained salience in contemporary discourse. The objective of this course is to acquaint the students with the basic idea of what constitutes collaborative governance and its complex manifestation in various parts of the globe. Public administration carries a hell lot importance in this present era. May quite essential? This is probably because, in democracy, everyone has a right to say his or her point of view and that is what differentiates him or her from the rest of the mass. Public past public administration was synonymous to government management, however, with increased vigore in participation of private sector into public matters some NGO'S committed to serve the public have joined the public sector. Public administration is carried out by public servants who work in public departments and agencies, at all levels of government, and perform a wide range of tasks. Public administrators collect and analyse data (statistics), monitor budgets, draft legislation, develop policy, and execute legally mandated government activities. This book provides deep insight to various dimensions of issues relating to the subject.

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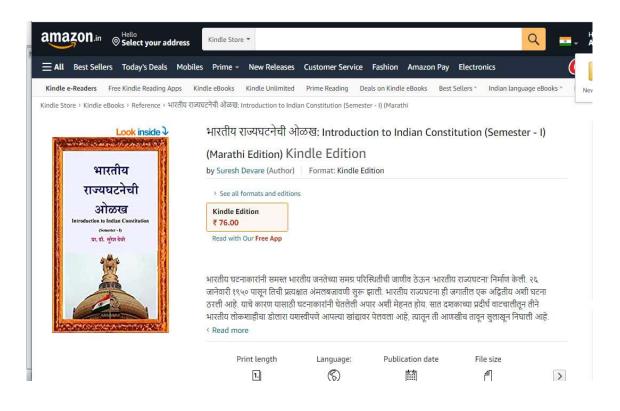


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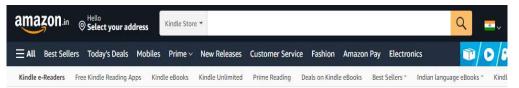
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- Dr. Surekha Bhingardive Head, Department of Economics, K.LSomaiya College of Arts, commerce & Science, Kopargaon, Dist: Ahmednagar (MS)

Abstract:

Tertiary education at non-degree level is distinct from higher education. There is an abundance of information that is necessary to prepare & ultimately manage university budgets. Piyush Goyal mentioned improving the quality of education as part of the ten dimensions of vision 2030. The government has allocated Rs 93,843 crore-3.3 % of total budget. Finance Minister Nirmala Sitharaman focused the new education policy, how India has the potential to become an education hub, study in India initiative, new skills for youth & Khelo India. India is not investing adequately in its demographic dividend. India is expending on higher education as an average 1.47% over 12 years to 2018-19. Not a single university has ranked in the top 200 as per the Times higher education world rankings 2019. The government needs to look at universities from the standpoint of opportunities they can provide in building a knowledge society.

Keywords: Higher education, Union Budget

Introduction:

Higher education is tertiary education leading to award of an academic degree. Tertiary education at non-degree level is sometimes referred to as further education or continuing education as distinct from higher education. The right of access to higher education is mentioned in a number of international human right instruments. The UN international Covenant on Economic, Social and Cultural Rights of 1966 Declares, in Article 13, that "Higher education shall be made equally accessible to all, on the basis of capacity, by every appropriate means and in particular by

the progressive introduction of free education". Higher education includes teaching, research, and exacting applied work.

There is an abundance of information that is necessary to successfully prepare and ultimately manage university budgets. Each college may approach the process differently but with the proper questions asked, appropriate forecasting completed and institutional support provided the process is manageable.

There was no big announcement for the education sector in the interim budget 2019-20. Interim Budget of 2019 Rs: 10,000 crore hike in education finance gest a cut. Piyush Goyal vaguely mentioned improving the quality of education as part of the 10 dimensions of vision 2030 envisaged by his government. On the social infrastructure side, every family will have a roof on its head and will live in healthy, clean and wholesome environment. We will also build quality, a science-oriented educational system with institutes of excellence providing leadership at the top.

The government had envisaged a National program on Artificial Intelligence which would be catalyzed by the establishment of the National centre on Artificial Intelligence as a hub along with centers of Excellence.

The government has allocated Rs 93,848 crore-3.3 per cent of the total budget expenditure for the education sector, over Rs 10,000 crore hikes from the revised estimate Rs 83,626 last year. The actual spend last year, at Rs 80215 crore was less than the allocated. Despite the hike share of expenses on education sector remains the same as last year. The government repeated claim on its stress on improving higher education, the allocation for higher education Financing Agency(HEFA) has been reduced from Rs 2,750 crore last year to Rs 2,100 crore this year. The actual spend by HEFA last year was just Rs 250 crore.

Union Budget 2019 -Highlights

Finance Minister Nirmala Sitharaman Presented the Union budget 5 July2019, Focusing on the education sector, She talked about the new education policy, how India has the potentional to become an education hub, the 'Study in India initiation occus on new according for youth and khelo India. Here are some of the major

highlights related to the Union budge2019 with some reactions.

• Government to start Study In India Programme to attract foreign Students:

Finance Minister said that three Indian institutions two IITs and IISc- now figure in top 200 institutions in world university rankings and the government will start a program 'Study in India' to encourage foreign students to study in Indian universities.

As India marches towards being a \$3 Trillion economy as the Finance Minister said to bring the education ecosystem up to and beyond global levels. Study in India, Stock exchange for social Enterprises will be a boost for the Tier 2/Tier 3 educational institutes as well.

Study in India program is meant to make India an attractive education destination for International students. The allotment of 400-cr to develop world-class institutional is to be highly appreciated (Union budget2019)

 To focus on new age skills for youth to get high-paying jobs

The Government will focus on importing new-age skill in areas like artificial intelligence, Internet to Things, big data,3-D printing, virtual reality and robotics to equip youth to take up high-paying jobs

The Concept of 'Kayakave Kailasa (Work is worship) to highlight that the government enables about 10 million youths to take up industry relevant skill training through the Pradhan Mantri Kaushal Vikas Yojana to create skilled manpower.

• National sports education board will be set up under the Khelo India scheme.

The union Budget 2019 has proposed significant changes which have the capability to revitalize the education sector. Apart from focusing on improving research and higher education via the National Research foundation it has promoted enthusiasm in sport as an important part of the development of today's learners.

• Setting up of National Research Foundation

It proposes set up a new national research foundation to fund and fouces on research & innovation. Funds available in

require a activity such as physical education. Goals provides the impetus for and the direction of action, while action entails effort : persistence in order to sustain an physical education activity for a long period of time.

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THE COMPARATIVE
STUDY OF PIXEL & OBJECT
BASED TECHNIQUES USED IN
IRS-P6 LISS-IV DATA

Dr. Ganesh K. Chavhan

Head, Dept. of Geography K. J. Somaiya College, Kopargaon

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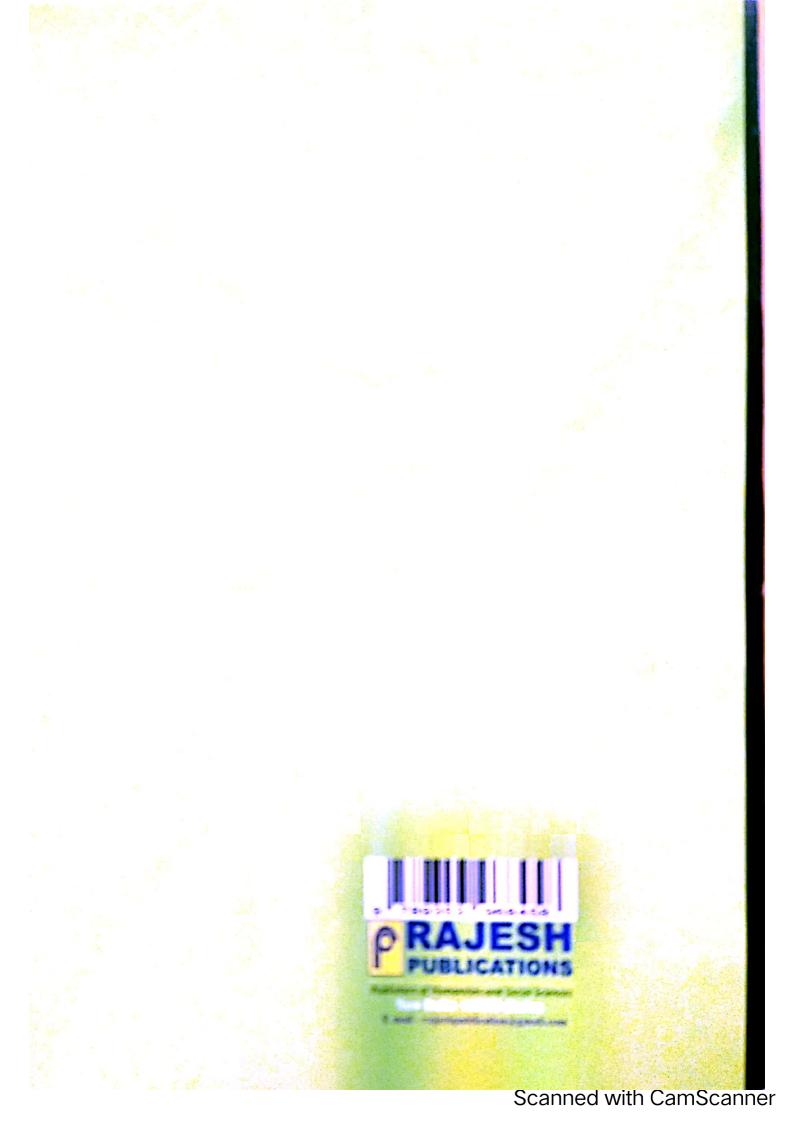
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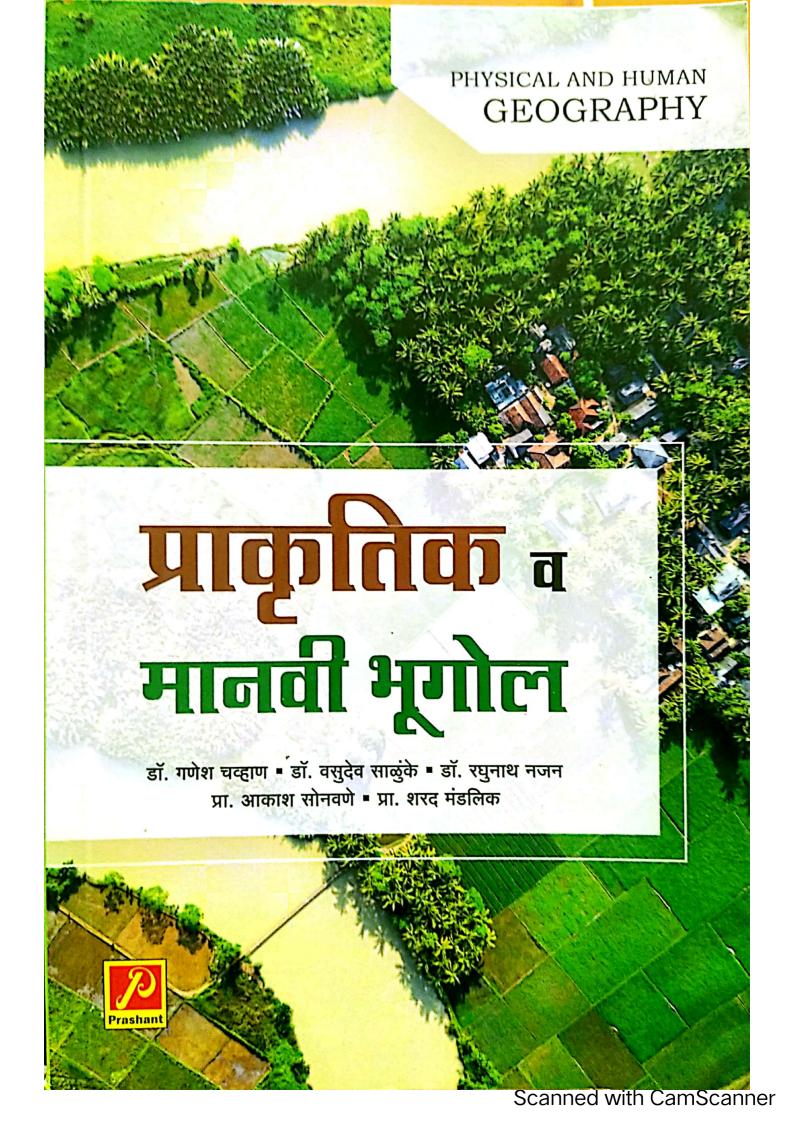
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या पुस्तकातील कोणताही मजकूर, कोणत्याही स्वरूपात वा माध्यमात पुनंप्रकाशित अववा संग्रहित करण्यांसाठी लेखक/प्रकाशक दोघांचीही लेखी पूर्वपरवानगी घेणे बंधनकारक आहे.

२ । प्रशांत पब्लिकेशस



प्राकृतिक भूगोल व मानवी भूगोल ह्या भूगोलाच्या दोन मुख्य शाखा आहेत. प्राकृतिक भूगोलामध्ये पृथ्वी व पृथ्वीशी संबंधित सर्व बार्बीचा अभ्यास केला जातो. या मध्ये प्रामुख्याने शीलावरण, वातावरण, जिवावरण, व जलावरण या प्रमुख बार्बीचा समावेश होतो. पृथ्वीचे भुकवच, पृथ्वीचे अंतरंग, पृथ्वीच्या बाहेरील असणारे वातावरण, त्या वातावरणाचे विविध घटक, पृथ्वीवरील वायुभार पट्टे, त्यांचा इतर अनेक घटकांवर होणारा परिणाम अभ्यासला जातो. तर मानवी भूगोल या विषयामध्ये मानव व पर्यावरण यामध्ये असणाऱ्या सह संबंधांचा अभ्यास केला जातो. मानवी भूगोलाचे महत्व, स्वरूप, व्याप्ती, याशिवाय त्यामध्ये मानवी लोकसंख्या, मानवी वसाहत, शेती इत्यादी मानवी जीवनाशी निगडीत बार्बीचा अभ्यास केला जातो. मानवाच्या सभोवताली असणारे नैसर्गिक पर्यावरण, त्या पर्यावरणातील अनेक घटक मानवी जीवनावर परिणाम घडवून आणतात. लोकसंखेच्या बाबत भारतीय लोकसंख्या, तिची रचना, वितरण, त्यावर परिणाम करणारे घटक, जागतिक दृष्टिकोणातून लोकसंख्येचा संक्रमण सिद्धांत, भारतीय लोकसंख्या वाढीचे गुण दोष, तर भारतातील विविध वसाहतींचे प्रकार, आकृतीबंध, नागरीकरण, नागरीकरणाचे स्वरूप, देशात व राज्यातील नागरीकरणाची स्थिति, भारतीय शेती आणि शेतकरी यांची परिस्थिती, शेतीवर परिणाम करणारे घटक, शेती आणि शेतकरी यांच्या समस्या इत्यादी दृष्टीने अनेक बार्बीचा ऊहापोह या विषयात विविध उदाहरणांच्या सहाय्याने करण्यात आला आहे.

भूगोल विषयाव्यतिरिक्त इतर अनेक स्पर्धा परीक्षा, नेट/सेट परीक्षा, यासाठी हे पुस्तक उपयुक्त ठरेल असाही एक प्रयत्न केला आहे.



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Changing Trends in MAN



ENVIRONMENT RELATIONSHIP



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Changing Relationship between Human Being and Environmental Resources: A Geographical Analysis Dr. Ganesh K. Chavhan

K. J. Somaiya College of Arts, Commerce & Science, Kopargaon.

Abstract:

Human livelihood is determined by the availability of resources within the environment either natural or manmade. By applying human skill, mind and power, human beings are able to maintain survival through eking out the resources for their requirements. From where and how do the human beings get resources are the important research questions to understand whether they have regular flow or exhaustive in availability. Increasing demand, short supply in comparison to demand and its increasing scarcity in extraction and exploitation, we often faced, are the further issues which determine the availability and utilization of resources, standard of human life and also frequently give pressure in the surrounding environment.

The aim of this paper is to deal with fundamental concepts and knowledge about resource management.

This paper is an attempt to explore differences of traditional definition of 'natural resources' to more dynamic discourse of 'resources are not, but they become'. This essay is based on exploratory review of the available published materials.

Keywords: Environmental Resources, livelihood, paradigm shift.

Introduction:

Nature provides resources to human beings for their survival. A resource manager requires understanding the

defini- tion of resource and its changing paradigm, dynamism and approaches in a specific social, cultural, and geographical ground. This article is an attempt to explore differences of traditional definition of 'natural resources' to more dynamic discourse of 'resources are not, but they become'. This essay is based on exploratory review of the available published materials.

There are two schools of thought. One is oriented towards the people (human) centric contextual ground of discourse of 'resource' with a view to combination of opportunities provided by the nature as a resource base and the human demand, mind, skill, knowledge, culture, society and rules and regulations; and the second is concentrated on natural resources as a free gifted stocks and its management for regular exploitation.

In the past, the resources were seen as natural gifts. This tradition is still remaining within the university curricula. University level resource management syllabus has been designed within the framework of natural resource management or the management of free gifted stock of resources. However, in practice, the philosophical thrust of resource management is more towards the blended of both. It is often mixed with the social and the natural contextual ground. The uni-directional natural resource management paradigm provides university graduates as well as resource managers no clear idea and they often are facing problems identification of management issues, and challenges and are confusing to dig out the solutions. The philosophical dictum and notions of conventional natural resource management have been changed and the emphases have been given more on the human or people centric perspectives.

Method of the Study:

Review of widely published documents, reports, books, and website materials along with the empirical field studies and knowledge based on practical ground have been used to bring discourse in this form. This article has put forth the framework of people centric conceptual ground to understand the resource management with a geographical perspective or unify both nature and society. From this understanding resource manager will able to achieve the goal of sustainable development. Introduction, conceptual ground, shifting paradigm, dynamism in the resource definition, natural resource management vis-à-vis resource management, and resource classification, evolution of the field of resource management, approaches and conclusion followed by references are the subheadings included in this article.

Ground for the Study:

Natural resources are derived from the environment. Many of them are essential for our survival while the others are used for satisfying our wants and the rest left as it is. The material world is heavily dependent on different natural resources. The widely used common definition of natural resource takes place naturally within environment that exists relatively undisturbed by mankind or available in a natural form.

A natural resource is often characterized by amounts of biodiversity and geo-diversity existent in various ecosystems. The variety and quantity of uses of natural resources have increased at present to such an extent that these were never found before in the history of mankind. New requirements for various resources in modern society

have increased the demand for them a thousand fold and have woven them into combinations whose patterns are constantly changing.

Shifting Paradigm:

Since the dawn of human civilization, the resources were used to be viewed according to the broad spectrum of the man environmental interrelationship. In the early days of human history, man perceived nature to control human activities.

Human activities were just to use the responses whatever provided by the environment. Nature's control over human action was strongly accepted. In the same way, extraction and utilization of resources was determined according to the nature's limitation. Hunting, food gathering and early days farming were the major sources of resource to survive. That was also defined as 'deterministic' or 'determinism' relationship of man and environment. According to this dictum, the nature controls the human activities. This was the philosophical paradigm. Gradually, man got success over the nature's law and control. They became able to alter the determinants of the nature.

Early days of industrial revolution have given more emphasis on high yield production system, large quantities of mineral exploration and extraction of resource in a scale of abundance. Man usually thought on control over nature. That period was perceived as 'possibilism' in the manenvironment relationship. Gradually, several mines were exhausted and forests were destroyed. The renewable resources were no-more renewed over the time of extraction. People thought that the nature gives opportunity to human being but the nature's law to control the resources is still

active. The concept of infinite sources of natural resources has been changed to perceive depletion. Several renewable resources require managing according to their replenish time duration. The harmony of man-environment interrelationship is accepted only after the proper management of resources provided by the nature. The interactive interrelationship between man and environment has been perceived for the sustainable future of human being.

In a more specific pragmatic ground, Zimmermann (1951) has defined the term 'resource' as 'resources are not they become'; they are not static but expand and contract in response to human wants and human action. A resource is not merely a tangible object but also a functional relationship that exists between people's wants, their capabilities and their attitudes towards the worth of an environment. Zimmermann has categorized the term 'man' and 'MAN'. To understand the resources one must understand the relationship that exists between MAN and nature. For that purpose it is necessary to conceive of the human beings as existing on two levels, the animal level and the supra-animal or human (social) level. The 'man' on the animal level constitutes part of nature. MAN on the human level represents the counterpart of nature. Nature is non MAN.

According to the philosophical dictum of Zimmermann the MAN's resources, to an overwhelming extent, are not natural resources. It is true that nature provides the opportunity for MAN to display his skill and apply his ever expanding knowledge. But nature offers freely only an infinitesimal fraction of her treasure; she not only withholds the rest, but seems to place innumerable and

in many cases, well-nigh insurmountable obstacles in the way of resource-seeking and resource creating MAN. The bulk of MAN's resources are the result of human ingenuity aided by slowly, patiently and painfully acquired knowledge. Knowledge is truly the mother of all other resources. The concept of resources is purel So long as the human race continues to climb upward to higher culture levels, culture is bound to become functional, inseparable from human wants and human capabilities. Increasingly important as the dynamic force in the creation of resources. Physical reality at all times is the basis on which human culture rests. The physical environment appraised both quantitatively and qualitatively and viewed as changing relationships of trends and forces rather than as static conditions. Therefore, at all times, the foundations of human productive efforts have been active and work for new innovations.

Nature sets the limits within which man can develop his arts to satisfy his wants. Within these limits he is free to select from the myriad possibilities offered by nature those which at a given time and place promise the best results in terms of want satisfaction in return for the human efforts applied there too.

Zimmermann (1951) discussed about the dynamics of culture. The dynamic force of culture is a penetrating one. The effects of cultural progress on nature come readily to mind. Not only wants and abilities of the individual man and group of men are affected by culture but education, training experience, sophistication, including the relationships between men, social organization, and societal institutions also come under its spell. Even the size of the human population is apt to be affected by cultural change.

N R M vis-à-vis Resource Management:

Natural Resource Management (NRM) refers to the management of natural resources such as land, water, soil, plants and animals, with a particular focus management affects the quality of life for both present and future generations. Natural resource management is congruent with the concept of sustainable development, a scientific principle that forms a basis for sustainable global land management and environmental governance conserve and preserve natural resources.

Natural resource management specifically focuses on a scientific and technical understanding of resources and ecology and the life-supporting capacity of those Environmental management is also similar to natural resource. The natural resource management emphasis on sustainability early attempts to understand the can be traced back to ecological nature of American rangelands in the late 19th century, and the resource conservation movement of the same time. This type of analysis coalesced in the 20th century with recognition that preservationist conservation strategies had not been effective in halting the decline of natural resources. A more integrated approach was implemented recognizing the intertwined social, cultural, economic and political aspects of resource management. A more holistic, national and even global form evolved, culminating in the Brundtland Commission and the advocacy of sustainable development.

Resource management is concerned with allocation of resources and biophysical and socioeconomic milieu in which resources are or ought to be developed. Such resource allocation patterns do not result in unnecessary deleterious effects in the biophysical and socioeconomic systems.

Resource allocation should therefore influence the production, consumption and distribution of resources in a direction consistent with the local, regional or national development objectives (Omara-Ojungu, 1992:3). It involves controls on the amount, quantity, timing, availability and the general direction of resource development. Resource management strategies are designed to promote exploitation, enhancement and restoration of resources.

According to O'Riordan (1971:19 cited in Omaro-Ojungu, 1992:4) resource management 'may be defined as a process of decision-making whereby resources are allocated over space and time according to the needs, aspirations, and desires of man within the framework of his legal and administrative framework'.

In a resource management context, the term is reserved for substances, organisms and properties of the physical environment i.e. natural resources. Human beings evaluate natural systems, regarding as resources only those elements which they have the knowledge and technology to utilize and which provide desired goods and services. Natural attributes failing to meet these criteria remain unvalued, 'neutral stuff.

Resource allocation is the spatial and temporal placing of resource uses in a pattern reflects the goals, priorities and aspirations of community. In resource management it is intended that such resource allocation pattern does not result in unnecessary detrimental effects in the biophysical and socioeconomic systems. Further, it allows resource allocation to be regulated by combination of and compromising in social, cultural, economic, ecological and institutional processes (Omara- Ojungu, 1992). Change,

complexity, uncertainty and conflict encountered in several steps of resource management (Mitchell, 1997).

Evolution of the Field of Resource Management: In both developed and developing countries the evolution of resource management as a distinct field of study has been late and slow. Prior to the 1960s, the aspects of resource management were studied in agriculture, forestry, and soil science and wildlife conservation schools. By the 1970s, a few universities in developing countries followed this by conducting courses under such titles as land use and resource assessment, environmental science, resource development and conservation, environmental management or resource management. At these infancy stage, resource management courses had a poor conceptual structure with strong emphasis placed on the issues of the day (land use land cover, pollution, soil erosion, deforestation and so on. Little attempt was made to relate the issues to the principles and concepts in resources management.

Conclusion:

Several reasons account for the late arrival of the field despite the fact that human use and abuse of resources have been on the stage for millennium. One primary reason is that for a long time the nature of resource was ill-conceived. Resources were originally considered abundant and in single purpose terms, with no or few inter-linkages within and amongst them. Perhaps the worst drawback has been the prolonged association of resources with what was commonly known as 'natural resources'. The concept of natural resources precluded other non-tangible especially common property resources such as air, climate, sun light and historical monuments whose quantities and value could

not be easily estimated using traditional economic framework. As a result, the change and damages to resource often passed without arousing public outcry. Resource management has evolved in response during the 1960s to shifts in the perceived values of land, labor. technology and capital. At various times, the resources have been conceived either as abundant or scare and management concern responded to emerging crises associated with subsequent use of resources. In the 1960s, however, fears of increasing resource scarcity, awareness of human ability to destroy, and inability to substitute for all resources prompted concerns from public and institutions associated with resource use. In the developing countries, the calls for resource management during the 1960s and 1970s were viewed as mixed up with concerns for environmental quality and limits on growth at a time when developing countries were hard pressed with needs for economic growth, provision of better facilities and conditions for education and health. As a result, the governments in developing countries usually paid only lip-services to calls for more effective resource management.

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प्रा. अमित एकनाथ सोनवणे

M.A. (Geography) B.Ed., SET, Ph.D., M.A. (History).

मॉडर्न कला बाणिज्य व विज्ञान महाविद्यालय शिवाजीनगर पुणे ०५, सहप्राध्यापक या पदावर कार्यरत आहे. पदवी व पदव्युत्तर विभागामध्ये १५ वर्षांपेक्षा जास्त अनुभव आहे. विविध आंतरराष्ट्रीय व राष्ट्रीय नामांकित जर्नलमध्ये ३० पेक्षा जास्त शोधनिबंध प्रकाशित झाले. याशिवाय १५ पेक्षा जास्त आंतरराष्ट्रीय चर्चा सन्नामध्ये शोधनिबंध वाचन व सहमाग घेतला, सावित्रीवाई फुले पुणे विद्यापीठ BCUD अंतर्गत २ लख्संशोधन प्रकल्प पूर्ण केलेले आहेत.

सावित्रीबाई फुले पुणे विद्यापीठाचा मान्यताप्राप्त संशोधन मार्गदर्शक म्हणून मान्यताप्राप्त असून २ विद्यार्थ्यांना मार्गदर्शन करत आहे.



प्रा. डॉ. वासुदेव शिवाजी साळुंके

M.A., Ph.D

कोपरगाय तालुका एज्युकेशन सोसायटीच्या के.जे. सोमैया कला याणिज्य व विज्ञान महाविद्यालयात पदब्युत्तर भूगोल विभाग सहायक प्राध्यापक या पदावर सन २००७ पासून कार्यरत आहेत. सन २०१२ मध्ये सावित्रीबाई फुले पुणे विद्यापीठाचा उत्कृष्ट कार्यक्रम अधिकारी पुरस्कार प्रदान, एक लघु संशोधन प्रकल्प पूर्ण केला. जुलै २०१५ सावित्रीबाई फुले पणे विद्यापीठाची पीएच.डी प्राप्त झाली, नभ नक्षत्रांचे या संदर्भ ग्रंथासह ६ हन अधिक क्रमिक

पुरतके प्रकाशित, विविध आंतरराष्ट्रीय नामांकित जर्नलमध्ये २१ शोधनिबंध प्रकाशित झाले.



प्रा. डॉ. शिवराम महाद कोरडे

M.A. Ph.D.

अहमदनगर जिल्हा मराठा विद्या प्रसारक समाज या संस्थित सन १९९६ पासून श्री ढोकेश्वर कॉलेज टाकळी ढोकेश्वर, ता. पारनेर, जि. अहमदनगर या ठिकाणी कार्यरत आहे. सप्टेंबर २०१८ मध्ये जे. जे. टी. यु. राजस्थान विद्यापीठाची पीएच.डी प्राप्त झाली. यू. जी. सी. नवी दिल्ली अंतर्गत एक व साथित्रीबाई फुले पुणे विद्यापीठा अंतर्गत एक असे दोन MRP पूर्ण केले. आंतरराष्ट्रीय नामांकित जर्नलमध्ये १४ शोधनिबंध प्रकाशित झाले. याशिवाय अनेक राष्ट्रीय व

आंतरराष्ट्रीय चर्चासत्रामध्ये शोधनिवंध वाचन व सहभाग घेतला.



प्रा. दिलीप जानेश्वर मृळुक

MA, M.Ed. SET

खेड तालुका शिक्षण प्रसारक मंडळाचे, हुतात्मा राजगुरू महाविद्यालय, राजगुरूनगर, ता. खेड, जि. पुणे येथे

भगोल विभागप्रमख म्हणन कार्यरत.

अध्यापनाचा एकूण १६ वर्षांचा अनुभव विविध राज्य, राष्ट्रीय आणि आंतरराष्ट्रीय परिषदांमध्ये सहभाग व शोधनिवंधाचे वाचन, अनेक शोधनिवंध विविध जर्नल्समध्ये प्रकाशित, व्याख्याने

आणि चर्चासत्रांमध्ये सहभाग, ममूप, आवआयजी या संस्थांचे आजीवसदस्य, राष्ट्रीय सेवा योजनेमध्ये कार्यक्रम अधिकारी म्हणून उत्कृष्ट कामगिरी, महाविद्यालयातील विविध समित्यांमध्ये कामाचा अनुभव, सा. फु. पुणे विद्यापीठाच्या इंकन्टेन्टसाठी लेखन.

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प्रा. डॉ. शिवराम महाद् कोरडे प्रा. दिलीप ज्ञानेश्वर मुळूक

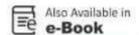


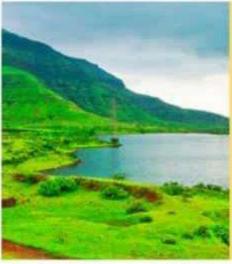


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पर्याकृतामा





भूगोल हा विषय तसा गतिमान असून तो निरीक्षण, अवलोकन आणि कृतीशील सर्वेक्षणावर अवलंबून असतो, म्हणून असे म्हटले जाते भगोल हा विषय पायाने डोक्यापेक्षा अधिक समजतो, उप्रह्मा डोळ्यांनी केलेली निरीक्षणे अनेक नाविन्वपूर्ण गोष्टी शिकवतात. भूगोलाचा अभ्यास करताना महाराष्ट्राचा भूगोल या विषयाचे ज्ञान आवश्यक असते किवहना भूगोलाच्या

अभ्यासाचा पाया मजबूत करायचा आपण ज्या प्रदेशात शहतो त्याची

स्पर्धा परीक्षांचा अभ्यास करणाऱ्या विद्यार्थ्यांना सदरील 'महाराष्ट्राचा

महाराष्ट्राचा भूगोल या ग्रंथात महाराष्ट्राचे प्रशासकीय स्वरूप, महाराष्ट्राची भौगोलिक रचना, महाराष्ट्राचे हवामान, नदीप्रणाली, महाराष्ट्रातील विविध साधनसंपदा या उपघटकांचा अभ्यास पहिल्या विभागात तर महाराष्ट्रातील शेती, महाराष्ट्रातील लोकसंख्या व वस्ती, महाराष्ट्रातील ग्रामीण विकास व महाराष्ट्रातील पर्यटन या उपघटकांचा समायेश दसऱ्या विभागात करण्यात आला आहे. प्राध्यापक, विद्यार्थी य

इत्यंभृत माहिती असणे अन्यंत आवश्यक आहे.

भूगोल' हे पुस्तक निश्चितच उपयुक्त ठरेल.



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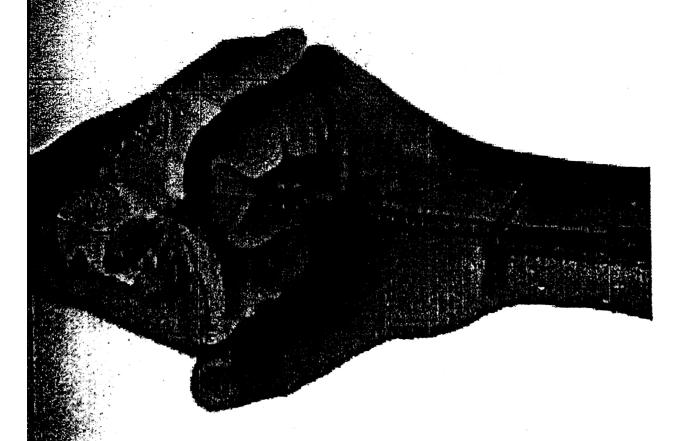


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MAN

&

MARONMENT BLATIONSHIP



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CHANGING TRENDS IN MAN AND ENVIRONMENT RELATIONSHIP

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Nature Conservation in Cultural traditions of India:

A Discussion Approach Dr. Santoh R. Pagare

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Abstracti

Virtually all the countries of the world have rich traditions embedded in the ethics of protecting nature. Many ancient cultures tell us how communities lived in harmony with nature, with a tradition of reverence for the elements that constitute ecosystems, drawing their sustenance from natural resources and at the same time protecting the environment that sustains them. Modern man tends to look down upon indigenous people as primitive, backward and illiterate, poor, may be superstitious. They disadvantaged in many other ways, but they have a tremendous understanding of ecosystems and the factors that sustain them.

The worship of Mother Earth is a universal phenomenon in many indigenous cultures. There are innumerable examples of festivals, rituals, songs, and myths that celebrate the gifts of Mother Earth all over the world, revealing the intimate sense of togetherness and harmony that exists between man and nature in tribal societies. An American - Indian community, the Sioux Indians, refused to till the soil because they did not want to wound the body of their mother, the Earth

Introduction:

In the words of Sitakant Mahapatra (1992): Theyestill look upon life as a gift to be celebrated; and his ancient

K.J. Sometye College of Arts²⁸ L.C. mmerc Earth as one to be praised, worshipped and also celebrated. They are the one to whom the earth is not something to be used, not a possession or an object for exploitation but a tiving entity, an object of reverence, and the relationship is one of sacred trust and loving intimacy. For, they believe as much in celebrating one's life in this world as in remembering, adoring and celebrating the world in one's life. The sacred soil of ancestors into which one is born is thus a part of one's fundamental psychic experience of life and is a part of its spiritual dimension. The earth, the land, the village enter into and are secure in racial memory and it is only an ethical imperative to worship the Earth goddess, the Mother Earth."

Indigenous people in many countries supernatural powers to plants, animals, rivers, oceans, mountains, the wind, sun and moon. Respect for nature is inherent in many religious faiths. Many Hindu gods and goddesses are shown to use animals as mounts. Sacred groves or sacred forests preserved with reverence have been part of Hindu and Buddhist culture.

In Christianity as well as in Islam, conservation of the environment is based on the principle that nature and its components are created by God, and humans are entrusted th the responsibility of protecting it. Many religions and Moral philosophies have professed the unity of all life on Sirth and the obligation of human beings to care for them.

Today, when people throughout the world are perturbed by the degradation of the environment and the disastrous consequences of this, traditional ethics of nature conservation could be looked upon as a source of inspiration and guidance for the future. Perhaps no other culture can

provide such a profound variety of cultural practices and ecologically sound relationship with nature as the Indian. This chapter is an attempt to bring together some of the information available on this aspect of Indian culture from various sources.

The Indian Tradition:

For the people of India, environmental conservation is not a new concept. Historically, the protection of nature and wildlife was an ardent article of faith, reflected in the daily lives of people, enshrined in myths, folklore, religion, arts, and culture. Some of the fundamental principles of ecology-the interrelationship and interdependence of all lifewere conceptualized in the Indian ethos and reflected in the ancient scriptural text, the Isopanishad, over 2000 years ago. It says, 'This universe is the creation of the Supreme Power meant for the benefit of all his creation. Each individual lifeform must, therefore, learn to enjoy its benefits by forming a part of the system in close relation with other species. Let not anyone species encroach upon the other's rights.'

The oldest visual image of the human fascination. love, and reverence for nature in India can be found in the 10,000 year-old cave paintings at Bhimbetka in Central India depicting birds, animals, and human beings living in harmony. The Indus Valley civilization provides evidence of human interest in wildlife, as seen in seals depicting images of rhino, elephant, bull, etc. Historically, conservation of nature and natural resources was an innate aspect of the Indian psyche and faith, reflected in religious practices, folklore, art and culture permeating every aspect of the daily lives of people. Scriptures and preachings that exhort reverence for nature and relate to conservation can be found

subcontinent. Hinduism, Buddhism, Izinism, Christianisy, Islam; and others place great emphasis on the values, beliefs, and attitudes that relate to the cross-cultural universality of respect for nature and the elements that constitute the universe. The concept of sinning against nature existed in various religious systems. Classical Indian myth is replete with similies of man in unison with the environment. Many of the rituals which to modern society may seem meaningless and superstitious were traditional strategies to preserve the intrinsic relationship between man and nature. The worship of trees, animals, forests, rivers, and the sun, and onsidering the earth itself as Mother Goddess, were part of the Indian tradition.

Sacred Plants and Animals: Many plants and animals have from historcial times been considered sacred in India by various communities. The most outstanding examples are the peepal tree (Ficus religiosa). The barryan tree (Ficus bengelensiss, and Khejdi tree (Prosopis cineraria), and these have been traditionally revered and therefore never cut. There are a number of other trees and plants considered sacred and grown in temple premises and are protected in other localities. More than a hundred such species of trees/plants in India are considered sacred by various communities and religious faiths. These include the sandalwood tree, beetlenut, palm, neem, coconut palm, juniper, champa, lotus, tulsi, pepper, etc. Such traditional cultural attitudes, though based on religious faith, have made significant contribution in the protection and propagation of various species of trees and plants in India.

wany animals are considered sacred and worshipped by several Hindu and other communities, and have thus received protection for centuries. The peafowl, sacred to lord Karttikeya is never hunted, the blue rock pigeon is considered sacred to Saint Hazrat Shah lalal and is protected in the Bengal region. Even rodents are considered sacred and are allowed to breed in the famous temple of goddess Karnimata in Rajasthan. The tiger and the cobra, though greatly feared, are afforded protection on religious grounds.

According to Asutosh Bhattacharya (1956): "In the pre-Aryan society of India tiger worship was in vogue from the remotest past. The seal engraved with the image of Siva, lord of beasts, that has been discovered at Mohenjodaro has also, among other four principal beasts, the figure of a tiger engraved beside Siva. Siva, the god of the ancient non-Aryan race of India, is clad in a tiger skin and it is a tiger skin which is his seat. Probably the tiger was the most primitive vehicle of Siva. Later, when cow-worship started in society, Siva was made to ride on a bullock, but a tiger skin was preserved for his wearing cloth and seat. The legitimate conclusion form the association of this particular beast with the god Siva is that the tiger-worship of primitive society has subsequently got mixed with the Saiya cult. Another proof of the special vogue of tiger-worship in regions lying outside the pale of Aryan society in Northern India is that there is a community named Baghel Rajputs in Rajputana. Perhaps they are the descendants of some primitive community of tiger-worshippers. They worship tigers and never hunt them,"

Snake worship has been an established cul famous the Nairs of Kerala. Snake groves or kavus abourging in wild trees and creepers housing a cobra's head carved in granite were found near the homes of many Kerala Hindus. The celebrated Padmanabaswami temple in Thiruvanthapuram has Lord Vishnu reclining on a mighty serpent. Many other animals are also worshipped as they are considered vehicles of gods and goddesses.

Dealing with the status given to 'animals in India, Sadashiv Gorakshkar (1988) states:

"In Buddhist mythology, the *Jatakas* or the stories of the Buddha's previous life are replete with several incarnations of the Bodhisattvaas an animal. Among the Jains, eighteen of the twenty-four Tirthankaras have an animal as their cognizance. It is interesting to observe that the first, second and the eleventh Tirthankaras have a bull, an elephant and a rhinoceros as their cognizance. Their antiquity could be traced to the Indus valley period (c. 2500 -1750 BC). The famous Pasupati seal, for instance, shows a deity seated with a horned crown and surrounded by an elephant, a tiger, a rhino and a bull/buffalo. On the other hand, those of the first. second, third, and twenty-fourth, viz. the bull, elephant, horse and lion make their appearance on the Ashokan pillar capital at Sarnath in the third century BC."

All these accounts vividly show how the ancient culture and traditions of Indian society contributed to the conservation of natural ecosystems, and the plants and animals that inhabited these.

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Nature in Indian Art and Scriptures: Indian painting, sculpture, architectural ornamentation, and the decorative arts is replete with themes from nature and wildlife reflecting love and reverence, and therefore the ethics of

1 5, e e of conservation. A wide range of mages of a animals are to be found in Indian miniature paintings and sculpture. The theme of the Hindu god Krishna's life depicted in miniature paintings underlines an appreciation of ecological balance. He is shown persuading people to worship the mountain in order to ensure rainfall. Krishna swallowing the forest fire also signifies a concern for the protection of forests and wildlife.

Innumerable examples of the status given to plants and animals can also be seen in the traditional sculptural art of India. The concept of vana devatas (tree goddesses), vehicles of gods and goddesses, sacred trees, tree and animal worship.' etc. are depicted in stone and metal sculptures independently, or as part of temples, palaces, and historical buildings. In literature and scriptures too there has been considerable depiction of the appreciation and love for nature: "Mahakavi Kalidasa, a prominent poet of the ancient period (fourth century AD) visualized, a cloud as a messenger in his Meghaduta and went into raptures when describing various seasons in his Ritusamhara. Such an involvement with nature is reflected even in the visual arts which excel in their minute depiction of nature.

Indian literature effectively mirrors the ethos of its deep and sympathetic understanding of animals through innumerable stories. Though an interior form of life, animals have been endowed with ennobling qualities which provide lessons in morals relevant even to human beings.

Just as the appearance of animals in dreams or visions is considered to express energy, which has still not been differentiated or rationalized, identification of oneself with animals has been interpreted to represent integration of the internations with sources of life itself. Indian approach to the animal world has consistently demonstrated this appreciation throughout its evolving pattern of thought, and it is no wonder that Indian art, while reflecting the changing approach to physical representation of animal form, has retained the core of thought that it has moulded." [Sadashiv Gorakshkar, 1988.]

Other Specific Contributions to Conservation:

Twenty-two centuries ago Emperor Ashoka decreed that it was a king's duty to protect wildlife and the trees of the forests. He got edicts inscribed on rocks and iron pillars throughout his kingdom, prohibiting the destruction of forests and the killing of various species of animals. This historical evidence, surviving to this day, is the first recorded measure on conservation anywhere in the world. In more recent historical times, Mughal Emperor Babur's memoirs (Baburnama), Guru Nanak's hymns on 'Baramasa' (the seasons) depicting each month with a dominant bird image, and Emperor Jehangir's memoirs showing his keen interest in and study of wildlife provide fine illustrations of this Indian tradition.

The love for nature has been handed down the ages, becoming an integral part of the Indian psyche. Nowhere is this better exemplified than in the martyrdom of the Bishnois in Khejarli village in Rajasthan. In 1730 AD the then ruler of a native state had ordered the khejri (*Prosopis cineraria*) trees to be cut in order to bake lime for the construction of a fort. This sparked off a strong collective protest from the local Bishnoi community. 363 men and women, young and old, one after the other, placed their heads against the trees to prevent them being cut and were

axed along with the trees. The ruler of the state was so moved by this swertfier that he sought pardon from the people and taked an order that no green trees should in future be cut in the Hishnoi village. This happened over two ago when the world had scarcely become conscious of ecological consequences of the reckless felling of trees. This legend is now celebrated by singers on stage and in the streets during the Tree Festival, (Man Mohan Singh, 1990).

This long tradition and belief in the conservation of nature is also vividly alive in contemporary times. One of the most successful conservation movements in India today is the Chipko movement spearheaded by the womenfolk of Clopeswar village in Garhwal in the Himalaya, Commercial felling of trees was effectively stopped by them by hugging the trees when lumbermen arrived to cut them. This simple yet effective action eventually saved 12,000 sq.km. of a sensitive water catchment area. There was a similar Apiko movement in the southern state of Karnataka.

Environment and Development:

India is no exception to the global phenomenon of environmental degradation brought about by developmental activities. Rapid industrialization, growing urbanization, intensive cultivation, and other developmental activities, coupled with increasing biotic pressure has had a very adverse impact on India's environment. The major areas of environmental concern today include, (i) deforestation, (ii) degradation of land resources, (iii) pollution of air and water, (iv) threat to natural living resources - Wildlin fisheries, etc. and (v) problems associated with urbaization - slums, sanitation, pollution.

Human and animal pressures have led to considerable deforestation. Deforestation leads to soil erosion and sedimentation that shorters the economic life of reservoirs, hydroelectric facilities, and irrigation systems. The problem of water and air pollution is assuming serious proportions in various parts of the country. With eighty per cent of industrial production confined to ten cities, atmospheric pollution is concentrated principally in the major cities and industrial towns. Apart from industries, the density of traffic is also contributing substantially to air pollution.

Two species of mammals - the Indian cheetah and the Lesser Indian rhinoceros, and two species of birds-the Pink headed duck and the Mountain quail-have become extinct during twentieth century alone. Eighty-one species of mammals, 38 species of birds, and 18 species of amphibians and repitles are now listed as 'rare' and 'threatened'. Among these are the tiger, leopard, Asiatic elephant, and all- the three species of the Indian crocodile. About 1500 species of plants are on the endangered list.

It was in the early seventies that, along with the rest of the countries of the world, India became conscious of another disquieting trend. The same efforts that had helped to bring people above the poverty line also put greater pressure on the natural resources of the country. The vast mority of our people are directly dependent on the country's natural resources for their basic needs of food, whelter, and fodder for their cattle.

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While the annual per capita income in India has been rising over the years, about 40 per cent of the people are still below the poverty line. Environmental degradation has

adversely affected the poor who depend upon the resources of their immediate surroundings. Thus the challenge of poverty and the challenge of environmental degradation are not two different challenges, but two facets of a single challenge.

In a developing country attempting to achieve rapid economic growth, there are often tensions between the of of environmental those protection and development. That environmental conservation cannot be isolated from the general issues of development and must be viewed as an integral part of it, and an essential prerequisite sustainable development, is being increasingly understood today. Conscious efforts are now being made to integrate environmental concerns into policies programmes relating to economic development. It is at this juncture that we should look back upon our rich tradition of living in harmony with nature, which over the years have been overshadowed by the Western utilitarian approach to scientific and technological developments.

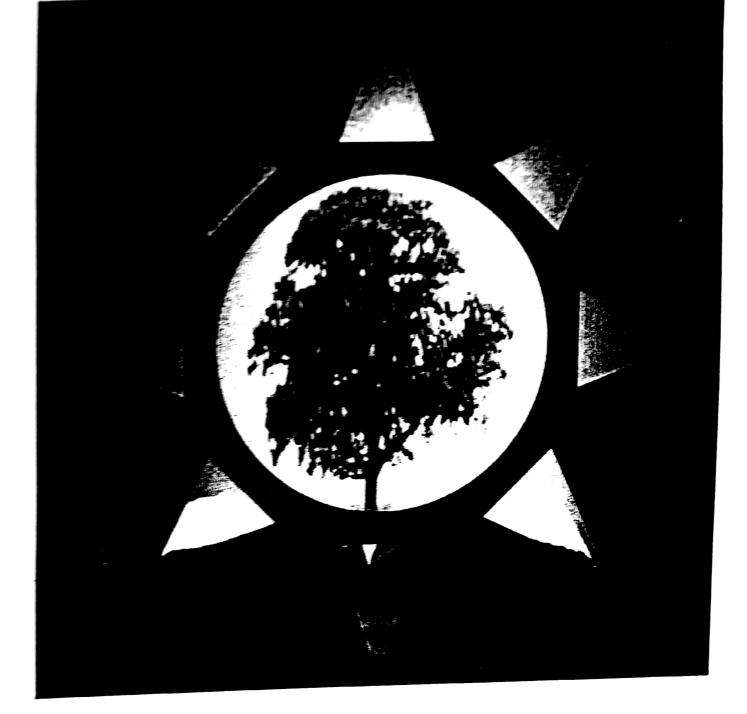
Conclusion:

India obviously needs a new strategy of resource use and a new common belief system to hold the society together and put this strategy into operation. The present strategy of resource-use intensification, leading to increasing levels of outflows from the countryside to the urban-industrial sector, which is heavily subsidized by the state, and from the country as a whole to the developed world, and the belief system centred on development and national prestige, which has replaced the unifying theme of a national struggle against the British, have proved inadequate. The new strategy has to be grounded in efficient, sustainable use

of resources and supported by belief system based on respect for the natural endowments of the country. There are welcome signs that such a strategy and such a belief system are beginning to emerge, although not enough has happened in tens of concrete action. What does ultimately happen will depend critically on how far society recognizes the real power of those whose well-being is organically linked to the health of the resource base of the country the peasants, the tribal peoples and the nomads.

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The Quality Sustenance through Academic and Administrative Audit

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Abstract:

Academic and Administrative Audit (AAA) is a structure to organize and maintain high standards in the ground of Higher Education. It plays vital role in providing quality education to the learners all over the world. In addition to the developed countries, even the developing as well as underdeveloped countries, are now-a-days coming forward in opting the AAA. It is a continuous process of self-introspection for the better growth of the institution. The present paper proposes to focus on the strategic evaluation of AAA for quality assurance in the HEIs.

Key Words and Phrases: Academic and Administrative Audit (AAA), Quality, Higher Education, Policy and Process of Education.

Introduction:

Academic audit is a process which assures all stakeholders in higher education that the institution has adequate and proper mechanisms to assure the quality and safeguard the standards of their educational needs. It is concerned with an evaluation of the way in which quality and standards are assured by instructions in the context of a commitment to continuous quality improvement. It provides public information on the soundness of an institution as a provider of the qualifications of national and international credibility as well as producing high quality research and providing services to support the social and economic development of the

It proves to be quite fit for purpose in advancing the institution's mission and goals and successfully deals with multi-

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faculty transformational challenges not only for the development of students but for the requirements of their social and economic development also. It also verifies institutions' management of the quality of their inherent academic activities in a manner that is fit for purpose in advancing the institution's objectives. It also provides security of the systems supporting the institution's qualifications-awarding work along with balancing the need for public credibility and independent and rigorous scrutiny. In short it encourages institutions to be self-evaluative and at the same time offers opportunities for enhancement of academic management of standards and quality. Former President and great scientist late Dr. A. P. J. Abdul Kalam said, "A developed India by 2020, or even earlier is not a dream. It need not even be a mere vision in the minds of many Indian. It is a mission we can all take up and succeed." Indeed nation building is a collective and cooperative process with honest and transparent approach in each and every aspect of various sectors.

Academic and Administration Audit (AAA) is the recent practice to evolve clear and transparent and yet authentic and systematic approach towards various steps of progress in the development of a particular institution and ultimately nation. On account of rapid changes, global competitive atmosphere and smarter human skills have driven organizational operations attracting renewed attention to the concept of 'audit'.

Scope of Academic & Administrative Audit:

The term 'audit' is Latin, which means 'he heard'. In other words, the student has completed the teaching process but has not been awarded any particular grade. The purpose of academic audit is to evaluate an institution's policies, systems, strategies and resources for quality management of teaching and learning, research, knowledge throw, guidance and consultancy and community services using the prescribed audit criteria. It is also concerned with outcome standards of teaching and research.

AAA is actually about facilitation of excellence in higher educational institutions by the stakeholders of higher education primarily by the teachers, management and community as well.

Same Very of NAAC: Some Issues and Perspectives | 81

The objective is the philosophy of mutual trust through building a nudit system to carry out academic audit of L. 84 The objective is the purposely with greater focus on issues roll of higher education institute purposely with greater focus on issues related to the outcome of particular institution. No doubt, auditing academic institutions is the need of an hour.

This process should be based on definite periodic intervals, Through mutually reinforcing system of institution-based quality assessments of teaching and learning and a coordinated regional system of external academic audits, quality assurance can be the prominent feature in higher education. The commitment to quality assurance in higher education through the continuous improvement of teaching and learning processes lies at the heart of the academic audit. Many institutions wish to ensure the best academic programme quality by proactive and systematic planning of renewing their existing resources and they re benefitted by the process of AAA.

Any institution scheduled for academic audit has to prepare a document based on certain guidelines setting out their approach to managing the quality and standards of their academic work including teaching and learning, research, consultancy, knowledge transfer and community engagement in line with the particular and specific vision and mission of their Institute. Academic audit, like more traditional programme review processes, is an academic auditor process including a self-study and a site visit by peers from outside the institution. The Academic Audit process emphasizes self-reflection and self-improvement rather than compliance with predetermined standards. The purpose of an academic audit is to encourage departments or programs to evaluate their "Education Quality Processes" - the key faculty activities required to produce, assure, and regularly improve the quality of teaching and

An academic audit asks how faculty approach educational decision making and how they organize their work, using the resources available to them and working collegially to provide a quality education in the best interests of the discipline and student learning. There are substantial reasons to conduct academic

audit. To assess the overall academic work of academicians and supporting units is the prime objective of AAA. Public institutions are directly funded by Governments and their effectiveness is necessary for continuous financial funds which are guaranteed by auditing. Besides one of the most important assets institutions display to attract students is whether they are accredited or not, which validates their degree upon graduation. This process of accreditation also required auditing of all academic and non supporting units regarding their efficiency for standards. Academic audit is the preparation and submission of a brief report- a self evaluation of the ways and extent to which the institution assures and enhances the quality of its provisions. In preparing their self evaluations, institutions should also consult relevant Government policies including those on higher education, and strategic planning guidance issued from time to time by different governing bodies for Higher Education.

Audit is an educational term used for the completion of a course of such study for which no proper evaluation or assessment of the performance of the student has been done on any scale of judgement.

Quality management includes arrangements for quality assurance, quality support and quality enhancement, and covers aspects of input, processes and outcomes. Academic audit requires assessing an institution's capacity for quality management of its academic activities in a manner that meets its specific mission, vision, goals and objectives, and meets appropriately with various expectations and needs of society and public in general. Sometimes this technique is used by individuals who want to complete a specific course without the risk of lower grades or the tag of average or below average etc.

Academic and Administrative Audit is related with Total Quality Management (TQM) in which Quality management entails a number of institutional planning and other action to address issues of quality and standards such as quality assurance, quality support, quality development, and enhancement and quality monitoring regarding policies, systems, strategies and resources used by the institution to satisfy, sustain, develop enhance, support,

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to review, monitor and act on quality requirements and standards. The technique of Academic audit may be helpful for assessing a lower confident group of students and also in case of beginners or for newly introduced subjects. Academic audit should be an evidence-based process carried out through peer review and assure Quality Assurance Framework. It is mostly concerned with the way in which higher education institutions exercise their powers as degree -awarding bodies, and each review should results in a report that sets out the degree of confidence that may be reasonably be placed in the provider's ability to assure and enhance the quality of its provision and safeguard the standards of its awards in line with the requirements of the qualifications set-up.

The Academic Audit should be based on reviewing and assessing the processes and activities of the institute regarding its initiatives for improvement and that progress on those initiatives have been tracked. Further, it is expected that the results of those implementations have been considered and used to further improvement in the program. It covers all the educational provision for which the institution is responsible. It is also concerned with the ways in which the institution assures the quality and standards of research undertaken by academic staff, consultancy and other knowledge transfer services offered by the institution and community service undertaken. Subject review can also be undertaken to judge the quality of student learning experience, the learning outcomes they are supported in achieving and the graduates are both fit for purpose and internationally credible.

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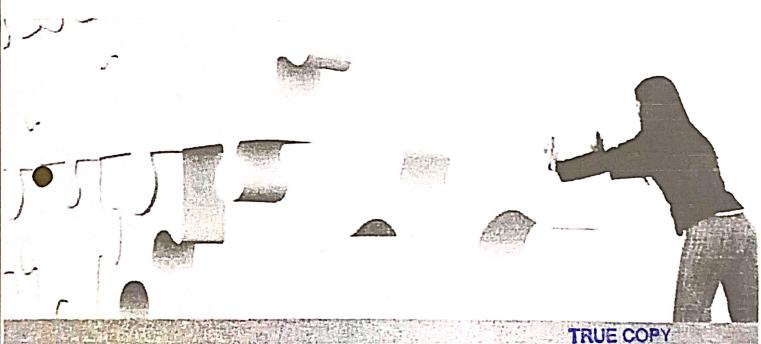
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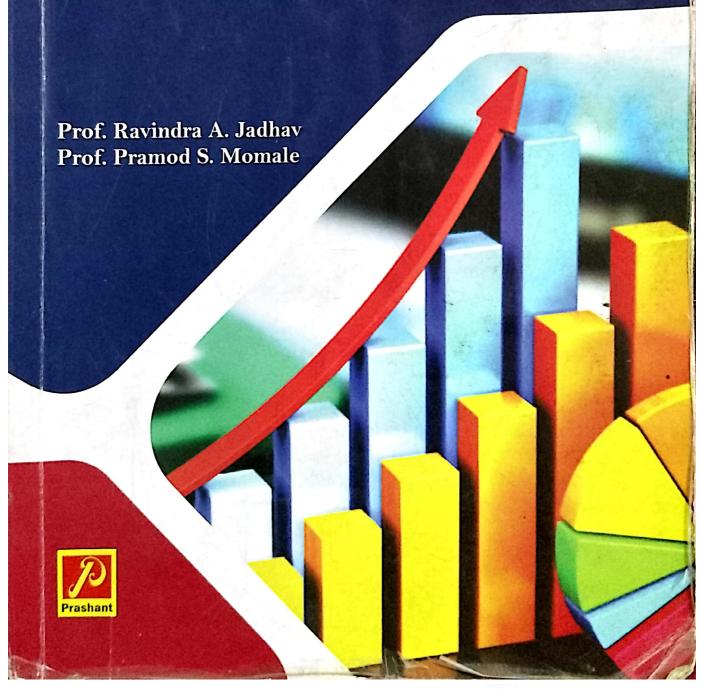
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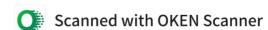
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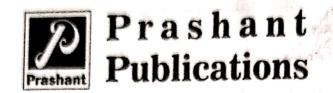
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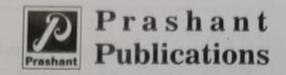
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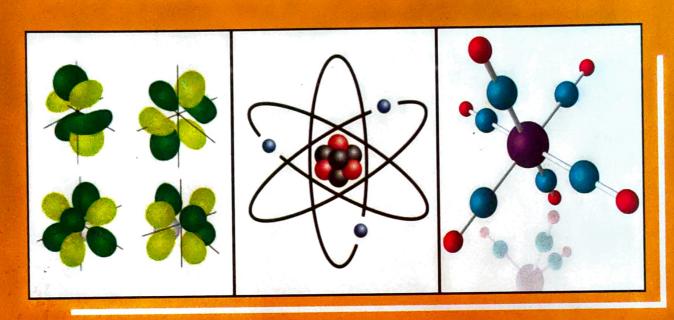
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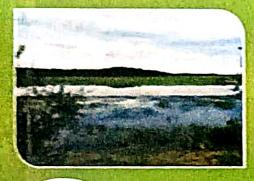


















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SEASONAL CHANGES IN THE OXYGEN CONSUMP-TION OF FRESHWATER BIVALVE MOLLUSCS: LAMELLIDENS CORRIANUS (LEA)

N.G. Shinde

Dept. of Zoology, K.J. Somaiya College, Kopargaon, Dist. Ahmednagar. Maharashtra

Abstract:

Oxygen is very essential element for life on earth, playing crucial role in all the living organisms' physiological activity throughout life. Aquatic animals take the oxygen dissolved in water, oxygen in water fluctuate according to the environmental condition. Present investigation has been carried out on oxygen consumption of freshwater bivalve Lamellidens corrianus (Lea) during different seasons like summer, monsoon and winter. This study shows that dissolved oxygen was higher in winter and lower in summer which automatically affects the physiological activity of aquatic animals. Like other aquatic animals these bivalves respire by means of gills and inhabit at the bottom. These organisms

are filter feeder which feeds on microorganisms and plankton at the bottom of water.

Introduction:

Oxygen content in water decide the life in water, rich in dissolved oxygen (DO) automatically flourish the flora and fauna in water. Changes in this physicochemical factor depend on other parameter and environmental conditions like temperature, higher the temperature lower will be the DO. The distribution and biology of freshwater bivalve Lamellidens corrianus is influenced by local ecological factors (like temperature, pH, inorganic salts, type of soil etc.), water flow system and presence of micro-organisms, teleost fishes and seasonal variations in these parameters. Along the coast of Jayakwadi backwaters at Paithan, near Aurangabad, the habitat of Lamellidens corrianus has been noticed that the input of organic matter into water concern the fate of post-winter to summer shed leaves. This period, having comparatively high temperature for different time intervals along the coast of backwaters, enrich either with the nitrogen source only or with both nitrogen and phosphorus sources. Micro-organisms at this time may enrich the water. The importance of leaf litter as food for aquatic organisms probably lies in providing an energy source for microbial growth and through the preference of animals for leaves that support micro-organisms a vast resource of energy is exploited (Hynes et. al., 1974) in streams and shallow waters leading to secondary and tertiary production. Thus, the particular organic matter is likely to increase during the late winter to summer. Fluctuations in the average environmental parameters for water which have been reported by Jhingran (1983). The water temperature varies from 18.5° C in January to 33° C in May. Temperature during monsoon, from August to September ranged between 24.0° C - 28.0° C. Hardness of water in terms of total carbonate was high during monsoon (120-145 ppm) where as it was low (80-112 ppm) during summer. Zooplankton during flood seasons (monsoon), phytoplankton during non-flooding seasons i.e. (winter and summer) and filamentous algae are common during both seasons. The animals like bivalve molluscs are filter feeders and that the degree of opening of shell valves and extension of the organs like foot for burrowing and siphons for active feeding depend upon the existing environment. Temperature is one of the most important factors having profound influence on the biotic communities. In general air and water, temperature depends on geographical location and meteorological conditions such as rainfall, humidity, cloud cover, wind velocity etc. Apart from limiting distribution depending on tolerance limits, temperature has profound effect on the metabolic rate in all organisms (Venberg and Liaknovich, 1965). In response to this reality, animals at all levels in physiology have developed mechanisms to meet the normal temperature variations of their surroundings (tolerance or capacity adaptation) and to withstand the extremes for periods of varying lengths (resistance or resistance adaptation). In tropical regions like India, in general the conditions are hot-dry from March to May, hot-wet from June to September, cool-wet in October and November and cool-dry from December to February. During the hot period the day length increases, i.e. from March to September. These weather conditions can have considerable impact on the life of bivalve molluscs, especially in the areas lacking heavy rain fall. The bivalve molluscs living especially in lentic environment have to face drastic environmental changes than those in lotic conditions. Many studies show that sunshine hours and temperature influence the solubility of gases in water, particularly that of carbondioxide and oxygen. Possibly long hours of sunshine enable the phytoplankton and other shrub population of the water body to carry photosynthesis for a longer duration. This helps in the utilization of carbondioxide of water. However, high summer temperature and bright sunshine accelerate the process of decay of organic matter resulting in the liberation of large quantities of CO₂ and nutrients. Apparently, this carbondioxide is utilized during photosynthesis by blue green algae which are abundant in the lentic habitat during summer (Verma et. al., 1984). As a part of genetic environment, every animal has a capacity to compensate for environmental change. It can live within a certain range of variations, whether the variable is temperature, humidity, oxygen supply or any other environment factor. Among several physical, chemical and biological factors, temperature is regarded as one of the most important factors which influences the animals activity in the environment.

In the present study, the experiments carried out using reservoir water in different seasons revealed that in summer high temperature depleted the oxygen content of the water and also depleted total carbonates. This is also true with the water samples from the habitat of Lamellidens marginalis (Akarte, 1985). Temperature rise above the optimum requirement can affect the physiology of bivalves (Bayne, 1976). The studies with polluting substances also revealed that the freshwater bivalves from Godavari river at Paithan are very sensitive to pesticide toxicity in summer than in monsoon and winter (Akarte, 1985; Muley, 1985). An oxygen concentration in natural waters is influenced by temperature, (Cairns et. al., 1975). Thus in summer Lamellidens corrianus from Jayakwadi back water faces severe environmental conditions and the physiological aspects or the endocrine aspects should be directed towards the studies through different seasons because the aquatic animal itself show cyclic changes in the aspects (Kulkarni, 1987).

DO is one of the most important abiotic parameters influencing the life in an aquatic environment. There are two main sources of dissolved oxygen in water (a) diffusion from

air which depends on factors like wind action, temperature and salinity and (b) photosynthesis which depends on transparency, turbidity, and algal biomass. At a given point of time factors like temperature, transparency, nutrient load and biomass of autotrophs determine the dissolved oxygen. Normally high dissolved oxygen is encountered in unpolluted aquatic ecosystem, while lower levels of the same in polluted areas. Further, depletion of dissolved oxygen to the level of anaerobia is the most critical manifestation of pollution. Lester (1975) has suggested the usefulness of dissolved oxygen as an indicator parameter for organic pollution.

Materials and Methods:

The freshwater bivalve molluscs, Lamellidens corrianus (Lea) were collected from Jayakwadi backwaters (Nathsagar) at Paithan, 45 km. away from Aurangabad. After brought to the laboratory, the shells of the bivalves were brushed and washed with fresh reservoir water so as to remove the fouling algal biomass and mud. The animals of 80-85 mm shell length were selected for experiment and they were acclimatized for 24 h. at laboratory condition in fresh aerated reservoir water (with renewal of water at the interval of 12-13 h.) and stocking capacity was given during this period and no food was given to the bivalves during laboratory acclimatization and subsequent experimentation.

The rate of oxygen consumption of the animals during different seasons was determined according to Winkler's modified technique (Golterman 1969), in a specially prepared brown colored respiratory glass jar of one liter capacity. The jars were fitted with rubber cork having inlet and outlet of glass tubes connected with rubber tubes and clips. Individual bivalve was labeled on the shell. The marked bivalve was placed one in each jar and the constant flow of reservoir water was allowed to flow for 1-2 minutes, through inlet and then the tube was pinched tightly without leaving any air

bubble in the jar. Soon after opening the valves, the time was counted till one hour. After one hour, from each respiratory jar the water was carefully siphoned out in the stoppered bottle of 300 ml capacity and oxygen content was determined. The flesh of the individual animal was then taken out carefully from the shell and blotted on the filter paper to remove excess water. This flesh was then weighed to obtain the wetweight of the individual. The oxygen consumed by each animal was then calculated and expressed as oxygen mgO₂/I/h wet-weight of the flesh. The rate of the oxygen consumption of each group was measured between 11.00 to 12.00 pm. in a day time. The wet flesh weights of three individual animals were noted.

All the values were subjected to statistical analysis for confirmation using student 't' test (Dowdeswell, 1957). Statistical and percentage differences were also calculated in experimental animals.

Results and Discussion:

Table-1

Physico - chemical characteristics of water during different seasons

Sr. No.	S eas ons	Months	Temperature (°C)	pH.	Hardnes (ppm)	Dissoved oxygen Content (mg/mit.)
1	Summer	April	30.0-32.5°C	7.4-7.8	80 – 105	5.50 - 5.90
		May	31.5-33.0 ℃	7.5 – 7.8	83 -83	5.25 -5.77
2	Monsoon	August	25.0 - 28.0 ℃	7.8 – 8.4	120 – 140	6.35 - 7.80
		September	24.0 – 27 .0°C	7.9 -8.7	125 – 145	7.35 -8.35
	Winter	December	22.0 – 23.0 °C	8.3 – 8.6	108 – 125	7.55 -8.10
		ja nua ry	18.5 – 20.5 °C	8.3 – 8.8	113 – 134	8.15 -8.40

Table-2

Seasonal changes in oxygen consumption of freshwater bivalve Lamellidens corrianus (Lea) (Bracket Values represents percentage difference)

. = P <0.001, .. =P<0.01, ... =P<0.05

Seasons	Summer	Monsoon	Winter
Days	0.2908	0.224	
2 nd	±0.03228	0.2314 ±0.0058	0.2743 ±0.0297
7 th	0.2415	0.2243	0.2200
, ,	±0.0103 (03.70)	±0.0105	±0.0122
	0.2305	(03.08) 0.2146	(19.78)
12 th	±0.0160	±0.0221	0.2105 ±0.0144
Thombus		(07.25)	(23.26)

The physico-chemical characteristics of the water used in the experiments i.e. temperature, pH, hardness in terms of total carbonates and dissolved oxygen contents during different seasons, are given in table-1.

The temperature of water was found maximum on April (30.0-32.5°C) and May (31.5-33.0°C) during summer and it was minimum during winter, i.e. on month of December (22.0-23.0°C) and January (18.5-20.5°C). The temperature of water slowly decreased from August (25.0-28.0°C) onwards till January (18.5-20.5°C) and then it was increased and reaching maximum in May. From August to September i.e. during monsoon, the temperature variation was between (25.0-28.0°C), while during the winter season i.e. from December to January temperature showed a fluctuation rang from (18.5-23.0°C). From April to May i.e. during summer season, temperature varied in a narrow range of (30.0-33.0°C). The pH of water was ranged between (7.4-8.8) throughout the study period. The

TRENDS OF RESEARCH IN ANIMAL SCIENCE maximum pH was found on January of winter (8.3-8.8) and maximum pH was roam (7.9-8.7). pH values were recorded September of monsoon (7.9-8.7) and on May (7.5-7.8) due: September of Monay (7.5-7.8) and on May (7.5-7.8) during summinimum on April (1) mer season. The hardness of the water was found higher during monsoon season i.e. on August (120-140 ppm) and on September (125-145 ppm) while it was found lower on April (80-105 ppm), and May (83-112 ppm) during summer season. The hardness of water was slowly increased during winter i.e. on December (108-125 ppm) and on January (113-134). During summer season, the shell valves are blackish in color but from the dorsal umbo region to one-third distance towards margin, it becomes lustrous. The posterior end of the body, near to the siphons of the shell valves are generally covered by fauling biomass, mud and detritus materials. The colour of the foot showed of green pigments from the surrounding, so appearing greenish (dark to light). The mantle was uniform in thickness and pale yellowish in color on July to September. The color changed to pink and it become translucent from September to November. From November to April, the color of the mantle was dull white and slight pink. The color again changed to faint pink on April and May during late summer season. From May to July, it remained dull white to pale yellowish in color. The morphological characteristics such as size, turgidity, and color were observed from August to September to December it becomes flaccid and changed its color to mixed pale yellow to white and become little turgid on December.

The dissolved oxygen content of the water increased during winter and monsoon season i.e. on January (8.15-8.40) mg/lit. and 7.35-8.35) mg/lit. in September while it was decreased in summer i.e. on May (5.25-5.77 and 5.50-5.90) mg/ lit. on April. A close relation between water temperature and dissolved O₂ content was found i.e. the oxygen content was minimum at high temperature and maximum at low tempera-

ture. The oxygen content also reduced in the beginning of monsoon season due to turbidity.

The variations in the rate of oxygen consumption in the bivalves Lamellidens corrianus on 2nd, 7th and 12th day during different seasons were given in the table-2. All the values of the rate of oxygen consumption were expressed as mg oxygen per gram body weight per liter per hour. During summer season, the rate of oxygen consumption was (0.2908 ± 0.0328) on 2nd, (0.2415 ± 0.0103) on 7th and (0.2305 ± 0.0160) on 12th day. The rate of oxygen consumption decreased (3.70%) on 7th and (8.08%) on 12th day compared to 2nd day. During monsoon season the rate of oxygen consumption was (0.2314 \pm 0.0058) on 2nd , (0.2243 \pm 0.0105) on 7th, and (0.2146 ± 0.0221) on 12th day. The rate of oxygen consumption was decreased (3.08 %) on 7th and (7.25 %) 12th day compared to 2nd day. During the winter season the rate of oxygen consumption was (0.2743 ± 0.0297) on 2nd, (0.22005)± 0.0122) on 7th and (0.2105 ± 0.0144) on 12th day. The rate of oxygen consumption was decreased (19.78 %) on 7th and (23.26 %) on 12th day, as compared to 2nd day.

In the present study, the dissolved oxygen from backwaters of Jayakwadi project shows considerably higher values during late monsoon and winter. While working on the freshwater bivalves from the water bodies in Maharashtra state a decrease in the dissolved oxygen during summer and high dissolved oxygen during monsoon were observed by Akarte (1985), and Saokar (1994). Upon the habitat of Lamellidens corrianus, the fluctuation in the dissolved oxygen tended to occur in post monsoon, probably because of the increased water level and persistence of turbidity in the water. Higher values of dissolved oxygen could be due to relatively stable abiotic conditions and higher algal biomass which stimulated the rate of photosynthesis. Compared to post monsoon and winter, low values on oxygen from March to

July could be due to higher water temperature, high BOD and lower rate of photosynthesis due to reduced algal biomass. Further it is possible that nutrient load was higher in summer resulting into built up of BOD coupled with low turbidity which restricted the euphotic zone and affected the rate of photosynthesis. The rate of decomposition might be playing an important role in controlling the oxygen level. Increased temperature during summer possibly stimulated the degree of decomposition in which dissolved oxygen is invariably utilized leading to fall in its value. pH (Hydrogen potential) is an acid alkalinity range (7-14) and negative logarithmic expression of hydrogen-ion concentration; 7 being neutral, less than 7 acidic and above 7 as basic or alkaline. Under natural unpolluted loctic and lentic environments, the pH of water on the habitats of the bivalve molluscs was shown to increase in winter and monsoon than summer (Akarte, 1985 and Saokar. 1994). The reported values of the pH ranged from 7.5 to 8.2 in the Godavari river water. In additional the heavy rainfall by causing considerable dilution of water and increase in the buffering effect caused fluctuations in the pH. The maxima of pH coincided with total rainfall. In the present study on the habitat of Lamellidens corrianus in the Jayakwadi backwaters, the water showed a small range of pH between 7.5 to 8.8. The water in the Jayakwadi project was alkaline throughout the study period with small seasonal variation. Similar results was also obtained by other worker from different region (Sreenivasan, 1974). According to Trivedy et. al. (1985) as soon as the productivity is increased, the pH of water also increased simultaneously.

Physiological ecology is the study on, how an animal is adapted to function in its particular environment. Such a study must be carried out normally in the environment, the animal experiences. Berg (1952) stressed the importance of measurement of respiration and it was emphasized "that fur-

ther experiments have to be carried out to test the seasonal variation of the respiration, i.e. its magnitude, and the possible correlation between reproductive period and oxygen consumption". The bivalve has to (1) expend energy only when the water being pumped which contains sufficient nourishment essential to allow a net gain of energy generally required for the work being done and (2) to accumulate the reserve of potential energy which can be favor the development of gonadal tissue as the spawning season approaches (Collier, 1959). Stickel (1973) stated that, nutrient deposition or depletion is dependent upon the balance between anabolism and catabolism, and one measure of metabolic activity often used is the rate of oxygen consumption which is affected by factors that fluctuate seasonally such as food availability and water temperature. The author further stated that changes in the metabolic rate of a species affect metabolite accumulation or depletion. Because of the importance of measurement of energy losses from metabolism in estimating energy flow through both populations and the individual organism, the respiration of bivalves has attracted widespread attention over many years (Bayne and Newell, 1983).

The studies carried out on Lamellidens carrianus revealed that the data of respiration is considerably affected through different seasons at the time animal experiences different environmental parameters. The study carried out for 12 days at intervals of 5 days are under laboratory conditions and since no food was given to the animals it is expected that the starvation effect might have also occurred. Masthanamma et. al., (1985) stated that the starvation effect, in Lamellidens marginalis occurs under laboratory conditions from 10 days onwards. Their observations were based on break down of biochemical reserves of the whole body of this bivalve. Thus, in the present study this dual effect of changes in environmental parameters and starvation revealed

TRENDS OF RESEARCH IN ANIMAL SCIENCE that in summer though the rate of oxygen consumption was decreased initially up to 12 days. In winter and monsoon the rate of oxygen consumption decreased on 7th and 12th day, This indicates that there is starvation effect during this period. Bivalve molluscs are very sensitive to changes in their environment (Jorrgenson, 1966). It is interesting to note from the present study that prevailing high temperature in summer increased the rate of oxygen consumption (it ranged between 0.23052 \pm 0.01603 to 0.2908 \pm 0.0388 O2 mg/l/h/g) and in winter prevailing low temperature decreased it (it ranged between 0.2105 \pm 0.01440 to 0.27431 \pm 0.2975 and in monsoon it was ranged from (0.21465 \pm 0.0225 to 0.23145 \pm 0.0059 O2 mg/l/h/g). Many workers have stated that the rate of respiration increases with temperature (Galtsoff and whipple, 1930; Ishida, 1935; VanDam, 1954; Berg et al., 1962; Nagabhushanam, 1966; Mane, 1975). Thompson and Bayne (1972) while studying the metabolism associated with feeding in Mytilus edulis stated that routine metabolic rate represents an increase over the standard metabolic rate due to sum of the "active cost" and the "physiological cost" of feeding. The authors concluded that the activity cost represents the energy cost of ventilation and the filtration, and the physiological cost represents the increased oxygen requirement that results from the intake of food and subsequent digestion and metabolism of ingested nutrients. However, in the present study, fluctuation in the rate of oxygen consumption during summer and winter revealed reciprocal relationship during the later period. In summer, the rate decreased till 12 days in winter also the rate decreased till 12 days. This effect is likely to be due to environmental effect including starvation and the physiological status of the animal. Minor fluctuation in the rate of respiration over the experimental period in monsoon shows clearly that the animal could withstand to the starvation effect in the laboratory. In monsoon the availabil-

ity of plenty of food material and high oxygen content of water lead to susceptibility towards starvation effect. Berg et. al., (1958) suggested that seasonal changes in metabolic activity are more closely related to food supply or reproductive activity than to temperature.

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ROLE OF MALACOFAUNA IN FRESHWATER ECOSYSTEM

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ABSTRACT

On the planet earth, each and every organism has its own importance; somehow all the organisms are interrelated to each other. Inter and intra relations of one organism with others play a crucial role for sustenance of life on earth. These includes all macro and micro organisms, population of these all organisms on earth is somewhat maintained by nature itself, if their population increase or decrease which automatically adversely affect the population of other organism which depend on it. All these organisms include flora and fauna. Among the animals, malacofauna is second largest groups of animals after arthropods which named as phylum mollusca, which also plays its important role in nature; these are the soft bodied animals which includes terrestrial as well as aquatic forms. Aquatic forms includes freshwater as well as marine. Present topic focus on the role of freshwater malacofauna in nature.

Keywords: Aquatic forms, Ecosystem, Molluscs, Invertebrates.

INTRODUCTION

Molluscs which are having soft body have four important regions viz. head, mantle, foot and visceral mass. They are sluggish animals with herbivorous, carnivorous and filter feeding forms; they form the calcarious shell for the protection of soft bodied individual. Shell may be univalved or bivalved, dextral or sinestral or it may absent in some forms. Freshwater mollusca includes two important classes gastropoda and pelecypoda (bivalvia), gastropods are having aquatic as well as aerial respiration and live in water and on land having amphibious mode of life while pelecypods are truly aquatic having gills for aquatic

respiration only and are also called filter feeders as they feeds on microorganisms.

Water is the most precious thing on earth only because of it the life sustains and flourish on the planet, water which is available in the form of marine water (salty in nature), freshwater (includes surface water and ground water) and in the form of ice. From all these form of water, freshwater is most fragile one, with heavy intrusion of anthropogenic activity it's becoming unsuitable for the freshwater organisms and it gets polluted. With Modern civilization, industrialization, urbanization and increased population which led fast

degradation of our environment. Water is said to be polluted, when it is changed in its quality or composition or indirectly because of waste disposal and other human activities so that it becomes less suitable for drinking, domestic and agricultural purpose as it has changed in its quality or composition (V. Ramasubramanian et. al. 2004).



Freshwater Pelecypods, Image Courtesy: https://www.nrem.iastate.edu/projects/roelab-freshwater-mollusks-fishes-andshrimps

Freshwater ecosystems are among the highest used, depended upon and exploited by humans for sustainability and well-being. The dependence on water and other resources in this environment has placed enormous pressures on the ecosystem worldwide resulting in direct impacts to species diversity and populations. While ecosystem assessments are broad based, the actual impacts of change can be understood from the status of species in those ecosystems. The relationship between biodiversity and human well-being is being promoted increasingly through the concept of ecosystem services provided by species (MEA 2005; McNeely and Mainka 2009). While covering less than 1% of the Earth's surface freshwater ecosystems provide humans with a wealth of goods and services, and provide a home for around 10% of the worlds described species, including a quarter of all vertebrates (Strayer and Dudgeon 2010). Major threats to freshwater biodiversity can be grouped under five interacting categories: over-exploitation;

Freshwater ecosystem which is frail one and includes other organisms along with these molluscs, it has different groups of animals having different habitat like bottom dwellers, middle dwellers and surface dwellers, gastropods and bivalves are surface as well as bottom dwellers. Most of the organisms in the freshwater ecosystem are interdependent.



Freshwater Gastropods, Image courtesy: http://www.aquariumfiltersetup.com/aquar ium-invertebrates/freshwaterinvertebrates/freshwater-snails/

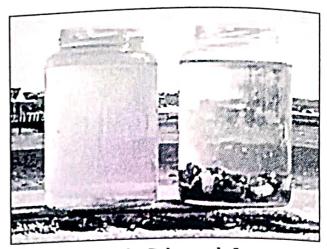
water pollution; flow modification; destruction or degradation of habitat; and invasion by exotic species, with global scale environmental changes being superimposed upon all of them (Dudgeon *et al.* 2006). These globally escalating threats have led to freshwater biodiversity falling into a state of crisis (Vorosmarty *et al.* 2010) and becoming more imperiled than their marine or terrestrial counterparts (Strayer and Dudgeon 2010).

Importance of freshwater molluscs

Freshwater molluscs are essential to the maintenance of wetland ecosystems, primarily due to their control of water quality and nutrient balance through filter-feeding and algal-grazing and, to a lesser degree, as a food source for predators including a number of fish species, and in some parts of the world they compose a significant food resource, especially for the rural poor. In some regions they are one of the most threatened groups of freshwater taxa (Kay 1995). The impact of developments

such as dams, and siltation caused by deforestation and agricultural clearance has not been adequately researched and there is little awareness of the complex life histories of some groups such as unionid mussels that rely on the maintenance of migratory fish runs to carry their parasitic larvae to the river headwaters. Many species are also restricted to microhabitats, such as the riffles (areas of fast current velocity, shallow depth, and broken water surface) between pools and runs (areas of rapid non-turbulent flow).

The fact that freshwater molluscs communities display poor species richness could be a common worldwide rule, if we compare them to their marine and land relatives. It is clear from survey that most of the molluscs endemic species reported may be endangered or vulnerable. Shrinkage in distribution range of populations, introduction of exotic species, and habitat loss are probably the most drivers of population declines of freshwater mollucs (Shinde Nitin 2017). Molluscs are an important group for freshwater biodiversity, and abundant play an important role in ecosystem functioning (Vaughn et al. 2004). They form an important component of most biological monitoring programmes that rate water quality and status of aquatic systems based on invertebrate assemblages (Ponder 1994, Seddon2000, Strong et al. 2008). Bivalves in particular, as they accumulate toxic substances to a greater extent than other organisms, are used to monitor water quality. Molluscs show a great specialization of ecological niches in freshwater environments, making them more vulnerable to modifications in their environment (Lydeard et. al. 2004). Consequently, freshwater molluscs have suffered a severe decline in diversity, distribution and abundance due to human induced alteration of habitats, pollution, siltation, deforestation, poor agricultural practices, the destruction of riparian zones and invasion by introduced species (Pimm et. al. 1995). Non-marine molluscs, which includes land and freshwater molluscs, comprise the largest number of recorded extinctions in the last 300 years (Groombridge B. and Jankins M. 1998). Hence, conservation efforts are urgently needed to maintain and recover these unique components of aquatic biodiversity.



Water filtration by Pelecypode Image courtesy: http://www.molluscs.at/bivalvia/index.html?/bivalvia/main.html

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Revised Accreditation Framework of NAAC

Some Issues and Perspectives

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Academic Library as a Learning Resource in **NAAC** Accreditation

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Abstract:

NAAC accreditation process has given the guidelines for better quality of work for the entire library system as a quality pointer framework. The complete procedure is developed and the library user is the most important factor of it, prerequisites and administration of the services the facilities and its usage gives good scores. Also the same there is good scope for innovative practices also. In this paper about college libraries and a vital role in the higher education as well as its quality identified, usage of the library services, Library Management, and the best practices are discussed.

Keywords: NAAC, College Library, Higher Education, Accreditation, Innovative Practices.

UGC has set up the NAAC (National Assessment and Accreditation Council) as a self-directed body in September 1994 for evaluation the higher educational organizations in India. The main objective of NAAC is to build higher education more significant to social and economic requirements. NAAC analyzes the infrastructure, amenities, and services and also assesses the work performance and academic excellence of the faculty of a Higher Education System. It has been inspiring force of significance, conscious between higher educational organizations, aims for regular improvement though improvement in standards cannot come about only by accreditation, therefore, the UGC has setup IQAC (Internal Quality Assurance Cell) for inside system for provisions, assurance and development of the excellence

civilization of education conveyed by them.

Main objective of the library is to support teaching and learning and the academic programmes offered and the library may advance of its services as well as its collection and services mainly to imitate the core curriculum needs of its users. Along with this the library has to develop a structure to distribute its products and services to catch the attention of more users. Eventually the basic aim of library should be at bringing all its users to the library and make sure its best usage. The structure designed here would make possible the quality improvement of library services to a huge level.

Quality Indicators for the libraries

As per the UGC guidelines the college libraries require to have made possible that to maintain helpful and simple access and use of library resources for all its users. The elements transmits to the library users, services offered, facilities, collection, rules, budget, procedure of services, additional activities etc. and at each step students and teachers are the get-together in fulfilling with it. Or, one can say that participation and maintenance of these constituents plays a vital role in the self-study report writing implement. Therefore preservation daily documentation requires staid concentration. Library rules and the responsiveness between the users joined with awareness on the part of the library staff becomes the main prerequisites. It is true that libraries mainly support teaching, learning, and research processes in the organizations. The set of questions framed for the library focuses on library infrastructure, collection, management and services.

Management of the Library

In colleges, the main aim of a library is to support the academic programs offered and the library expands its collection and services mostly to reflect the curriculum requirements of its users. Besides, the library may design a system to deliver its products and services to attract more users. Eventually the library should aim at bringing all its users to the library and make sure most advantageous usage of resources. The limitations compiled here would make easy the excellence improvement and nourishment of library services to a great extent. The libraries of the affiliated colleges may firm 122 | Prashant Publications

up their performance by equipping/enabling themselves; Library supports academic programs through its healthy collection and various services. Reaching to all users is a challenging job. Library is looked upon as an independent body. Throughout well-identified methods library can function more successfully. NAAC requires the library to explain about the continuation of the Library Advisory Committee

In the library physical facilities, library has the separate building; Libraries require offering safe, comfortable, well lighted, clean space, with sufficient and suitable seating arrangement. To ensure efficient use of the library's resources, print as well as electronic resources, also college libraries are need to think about the study space requirements, while assigning the seating space with special attention being paid to reserve collection. The library requires preparing rules and regulations. Also the library has expanded suitable working hours before/after the class hours? Also the generator facility extended to the library?

Is there a fixed library policy of its collection development, stock verification, and training? Does the college have a Library Advisory Committee? What are the funding / financial sources other than the state, central and UGC grants? Library is fully/partially automated. Are there facilities of internet and computers?

Institutional accreditation and the assessment of a library by NAAC is essential part and it is a key step that integrated itself with the general assessment, library is center point of all to maintain for the complete academic activities. All this participates up the requirement for technical assessment of library so that its function as the center part of academic enlargement is sheltered and developed by the act of library ability and services based on NAAC strictures.

Information Communication Technology

With the help of library students can make the progress in their academic and co-curricular efforts. One can say that the library is a place for self-study and self-development. It develops classroom teaching and offers a stage where students can build up their potential capacities by using library resources and services. In other words library supports teaching, learning, and research Revised Accreditation Framework of NAAC: Some Issues and Perspectives | 123

processes in the organization. Currently major developments ICT based library and information services and it is possible due to internet and web resources. Information is published in a variety of forms; ICT has controlled conventional way of library. In colleges syllabus is updated, new courses are introduced and selffinancing courses have occupied a good position in the colleges. College library has to keep up to these challenges by updating its collection and services. All these growths in the institutional surroundings and growths in ICT, and emergence of new media in information world have forced libraries to change their role and shoulder newer responsibilities. Hence the accreditation process has focused on library and the library started providing the services and the facilities ICT based like Resource sharing/ ILL, Bibliographic compilation Photocopy and printing services, circulation services, clipping services, reference/referral services, information display and notification services, user orientation/ information literacy, Internet and digital resources availability. Automation of Library using the ILM Software's also the use of e-books and e-journals, providing the remote access to e resources in the library have become essential. Offering for these and such other improvements as well as usage of it is significant factor of the quality of an academic institution.

University Grants Commission (UGC) and the National Assessment and Accreditation Council (NAAC) has successful in promoting excellence as a defining aspect of higher education organizations in the country throughout a mixture of self and exterior quality assessment the excellence of higher education organizations is multi-dimensional. Thus, NAAC uses many criteria for evaluating the quality of higher education institutions in the country as follows:

- Curricular Aspects
- Teaching-Learning and Evaluation
- · Research, Innovations and Extension
- Infrastructure and Learning Resources
- Student Support and Progression
- Governance, Leadership and Management
- Institutional Values and Best Practices

Along with these, Teaching-Learning Resources are the library and information services recommended to support the teaching, learning and research activities of the higher education institutions. The NAAC has distinguished the significance of library and information services in higher education organizations extremely well and they assess the excellence of the learning resource center as part of the assessment of the quality of higher education organizations in the nation

NAAC had issued currently a set of 'Guide lines on Quality pointers in Library and Information Services' to improve the quality of the learning resource center in affiliated colleges and Universities. In order to advance the quality, the college and university libraries should provide good library facilities its collection; and services. They must provide required facilities to encourage successful access and use of all resources. All the facilities, collection, and services provided, and the tools and methods used should meet and satisfy the library and information needs of library users.

Evaluating the needs and prerequisites as well as the fulfillment of the users with the view to the library and information services is extremely required. The NAAC has observed that the basic purpose of the college librarian should always be 100% user satisfaction. It is discoursed that the purpose of the library should be user focused and the librarian should be the predictor of thinking and satisfied the users. It shows that there should be a user based assessment of the quality of library and information services offered in higher education institutions in the country.

The accreditation activity is increasing impetus in our nation as people and educational organizations have come to understand that excellence improvement is necessary for the organizations. In the procedure of institutional accreditation libraries have an important role. The services of libraries have been increasing as they add largely to the learning development, however it is institutional accreditation that the NAAC does, the evaluation of a library, a very important sub unit is a key step that incorporates itself with the largely assessment; library is main aspects to support for the Revised Accreditation Framework of NAAC: Some Issues and Perspectives | 125

academic developments. Assessment of library is a necessary part in the accreditation process, where the collection, services and their outreaching ability are examined. In the current past major developments have been reported in library and information services and the libraries are carrying newer liabilities in higher education Libraries greatly maintained teaching, learning and research process. College's libraries require to have made possible that support useful and interactive access and use of Information resources for all users.

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