



INTERNATIONAL STUDENT LED CONFERENCE (3 RD EDITION)

ON SUSTAINABLE DEVELOPMENT GOALS

AS PART OF

9TH CHAIRMAN'S CHAMPIONSHIP

(AN INITIATIVE OF JGI)

Date : 4th November 2023
Saturday

Time : 10:30am to 1:00pm



Presided By

Dr. Chandrashekar DP

CEO-JGI PRESIDENT - ACADEMIC COUNCIL

Dr. Mona Mehdi

SECRETARY - ACADEMIC COUNCIL

Mrs. Lalitha Kosaraju

JT - SECRETARY - ACADEMIC COUNCIL

Distinguished Guests (Jury)

Dr. Nilofer Hussaini
Bangalore

Dr. Uma Shankar. M
Bangalore

Dr. Tajwar Hussaini
Dubai

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Message by Dr Chandrashekhar DP



Making decisions and exercising discretion are two essential concepts connected to the secret to sustainable growth. Put simply, having discretion makes you a far better and sharper decision-maker. Since most of us in this room are from relatively decent backgrounds, it is our duty to exercise caution while using our privilege and to discern between reasonable and excessive spending. These young minds have brought up concerns and problems with the existing state of affairs in addition to providing insightful commentary on important global issues. The thorough and succinct information that these young scholars have offered makes it clear how urgent it is to act. Action is required from governments, societies, towns, and educational institutions. The research of young scholars clearly shows that greater effort is needed for sustainable growth and that the actions we are now doing are not enough. The young researchers have provided us with valuable information and crucial recommendations for our next course of action. We shall all share in this success if we cooperate. We are all a part of this global community, this planet Earth, which makes this possible.

Dr Chandrasekhar DP

President, Academic Council and CEO of JGI Group

Message by Dr Mona Mehdi



A significant occasion in the JGI calendar, the Chairman's Championship was first held to unite all of the JGI Hyderabad cluster's schools, foster friendly competition between the branches, and, of course, promote experiential learning. Sports events were the first, followed by Edufest, the model youth parliament, and now this innovative student-led conference on sustainable development global goals, which involves schools from JGI, India, as well as other countries like Dubai, Malaysia, Nepal, and the United Arab Emirates. Our school wants to educate pupils about global concerns and encourage them to take proactive measures to tackle them through research and action. Whatever way ideas are presented and exchanged, that is what it is. Prior to this conference, a great deal of study has been conducted. Seeing these bright young minds discuss the global goals through in-depth study and paper presentations was a wonderful experience for all of us. Even though they are spread out throughout the globe, the jury members have had similar experiences assessing the abstracts, research articles, and oral presentations. In order to improve the social challenges and make the world a better place to live I hope these students with their extensive research and working towards solutions during these conferences will provide solutions to the world of changes.

Dr Mona Mehdi
Secretary, Academic Council
JGI Schools

Message by Dr Nilofer Hussaini



I'd like to express my gratitude to Dr Chandrashekar DP and Dr Mona Mehdi and for inviting me and making me a part of this event. This program strikes me as really noble. The conference theme is incredibly meaningful and relevant in today's world. A awareness that the universal and transformative agenda for sustainable development is more than just another plan for the world, but rather a shared vision of the world. In this aspect, students' voices matter as we assess the difficulties we confront as a global community. An opportunity like this allows students to increase their awareness and critical thinking about significant global issues, as well as to express their viewpoints and critical thinking in a creative and insightful manner. As a jury member, I was quite impressed by the research's excellence and quality of the research papers and presentations. It's been a very enlightening and enriching experience.

Dr Nilofer Hussaini

Assitant Professor in the Dept. of Professional Studies

Christ University, Bangalore.

Bangalore

Message by Dr Uma Shankar



I feel like I'm always being listened to and learning a lot .A vast amount of knowledge is being absorbed by these young, susceptible minds. There is a incredible improvement in the way students have evolved during the last two seasons. It was a true joy to be part of the jury. After going through the research articles and abstracts that were sent to me, I came to the conclusion that we are giving the children a favourable environment for growth. As a responsible person, I am confident that we will create an environment that is conducive to learning for upcoming generations in India and around the globe. We are working on projects like the Sustainable Development Goals (SDG) in addition to conducting research. It is commendable that all these students have been problem solvers from an early stage with research as an essential element. Through this, the students have demonstrated their innovative ideas meticulously. My heartfelt congratulations goes out to everyone concerned, especially the Academic Council, for putting together such an effective student-led gathering.

Dr Uma Shankar

Associate Professor

Department of Management Studies

Bangalore

Message by Dr Tajwar Hussaini



Being a part of this worldwide student-led conference, hosted by the JGI group of schools, makes me very happy and honoured. To unite us all on one platform and enable students to be a part of the quest for knowledge, the organizing team has shown incredible initiative. For all the participating teams, JGI Schools has given a robust competition. Beyond comprehension, the teams have received incredible exposure and education. With an abundance of insightful facts and information, the teams' well-researched piece has been presented. In light of this, I would like to wish everyone involved and encourage them to keep seeking out new and enriching knowledge. Their dedication is demonstrated by their hard work, and the information displayed in the research is what they need to succeed as a person. Wishing everyone the best of luck, since just being a part of such an event is an accomplishment in itself.

Dr Tajwar Hussaini

Assistant Professor

UK College of Business and Computing- Dubai Campus

LIST OF PARTICIPATING TEAMS

Team – I

Saisha Varma, Aarohi Sharma, Syed Amir

School - DPS Modern Indian School, Qatar

Topic: Gender Equality

Team – II

Prasanna Adhithya Balagopal, Saksham Uboweja, Gouri Menon

School - GEMS Modern Academy, Dubai

Topic: Affordable and Clean Energy

Team – III

Sujith Singam, Miftha-Ul-Jannath , Abhinaya Kavasheri

School - Jain Heritage a Cambridge School, Shamirpet, India

Topic: Good Health and Well-Being

Team – IV

Ananya Nair, Gokshetra Akkinapalli, Rohitha Kandagatla

School - Jain Heritage a Cambridge School, Kondapur, India

Topic: Life Below Water

Team – V

Om Patel, Tehreem Hussain, Ishanvi Choudhary

School - Jain Heritage a Cambridge School, Nagpur, India

Topic: Decent Work and Economic Growth

Team – VI

Nishan Khatri, Shristii Koirala, Nancy Magar

School - Manaslu Public Secondary School, Kathmandu, Nepal

Topic: Sustainable Cities and Communities

Team – VII

Riya Naphade, Arnav Netankar, Aishwarya Ingole

School - The Jain International School, Aurangabad, India

Topic: Quality Education

TEAM - I

Saisha Varma, Aarohi Sharma, Syed Amir
School - DPS Modern Indian School, Qatar

Topic: Gender Equality

Abstract:

The fifth Sustainable Development Goal is focused on "Gender Equality". The history of emphasizing gender equality in international development traces us back to various global conferences and movements that highlight the importance of women's rights and empowerment. Gender equality is not merely an objective; rather, it serves as a catalyst for self-sufficiency particularly in developing nations. This makes achieving gender equality not just a moral imperative but an economic and social necessity. The importance of gender equality around the world and the impact of it in achieving sustainable development is tremendous. Effectuating gender equality involves dismantling barriers, eradicating discrimination and addressing societal biases which requires efforts, reforms and cultural change. Achieving gender egalitarianism will help build a world where every individual, regardless of gender, can thrive and contribute towards a brighter, more equitable and harmonious future.

Keywords: Gender Egalitarianism; Equitable Future; Women Empowerment; Societal Biases; International Development

Research Article

Introduction

Gender Equality, symbolized by the fifth Sustainable Development Goal (SDG 5), is significant in addressing social disparities. The historical backdrop of this goal reveals a long-fought struggle marked by various global conferences and movements advocating for the recognition of women's rights and empowerment. The importance of gender equality is supported by compelling data. According to studies, Gender Equality has increased by 1.2% annual increase in value-added labour productivity, and this keeps on increasing as we bridge the gap between the genders. The objectives of SDG 5 extend beyond mere statistics, encompassing a commitment to break down barriers and eliminate discrimination. This goal aims to provide equal access to education, health care, and economic opportunities for all, regardless of their gender.

History

The history of gender equality is complex and varies across different cultures and regions. The struggle for gender equality has been ongoing for centuries and has involved various social, political, economic, and cultural movements. In some ancient societies, women had certain rights and roles, but these were often limited compared to those of men, and women. The mid-20th century brought about a second-wave feminist movement, which focused on broader issues such as reproductive rights, workplace discrimination, and gender roles. Ever since then, numerous movements for women's rights like the suffragette movement, the HeForShe movement, the Global Fund for Women, and various other efforts have been made to advance the cause of gender equality.

Review of the Issue

In a world striving for progress and equity, gender equality, a multifaceted issue remains with women facing systematic disparities and denial of fundamental rights across the globe. The issue transcends borders, encompassing a multitude of inter-related problems such as unequal access to education, income inequality, limited economic opportunities, and disparities in healthcare. Discriminatory practices and cultural bias often hinder women's participation in decision-making processes, leaving them marginalized and disempowered. Therefore, Gender Equality is crucial in empowering women for an equitable future.

Education:

1) Gender Equalities in Access to education:

- Globally, women and girls still face significant disparities in accessing education. According to UNESCO, a high percentage of girls in low-income countries like Somalia, Liberia, and Mali have never been to school and only 36% of the girls complete their secondary education.
- Nearly 21% of the girls drop out due to the reason education costs too much compared to the 16% of boys.

2) The Importance of Educating Women:

- Education of women is not just a matter of individual empowerment but is a fundamental driver of societal progress. It leads to increased economic opportunities, better health outcomes, and a reduced poverty rate.
- Education of women can also narrow the pay gaps between men and women and they are also more likely to get work.

Economic Participation and Employment:

1) Inequalities in Employment:

- Women are less likely to be employed compared to men due to social stereotypes, the current global labor force participation of women is just under 47%. Women also tend to earn less compared to men and are engaged in unprotected jobs.

2) Importance of having Equal Employment for all:

-This can increase the skilled workforce of the country contributing to improved national productivity and economic growth.

-Stronger roles for women in employment can also improve child survival and overall family health. In short, investing in women is central to sustainable development.

Political Representation:

1) Inequalities in voting and political representation:

-Women are consistently underrepresented in many parliaments around the world. This has resulted in the restriction of women's ability to influence decision-making and also hinders the diversity of perspectives in political-decision making.

-Women also continue to hold fewer ministerial positions in government globally. This raises concern about the equitable distribution of power and the diversity of voices shaping political agendas.

2) Importance of women's representation in the political sphere:

-Women often prioritize critical issues like health, education, and social welfare ensuring a comprehensive policy agenda. Women in political leadership foster more inclusive international diplomacy, contributing to peace and cooperation.

Gender Inequality, Developing Countries and Solutions:

Achieving gender equality, especially in developing nations is of utmost importance.

Burundi is one of the least developed countries in the world, ranked 229th in terms of urbanization. When females, who make up about 50% of the population, do not have access to opportunities and resources, the development gets decelerated. Half the productive citizens mean half the amount of productivity. Achieving gender equality, especially in developing nations is of utmost importance. Gender equality is not only a matter of social justice, but also a key driver for economic growth and sustainable development. When women are empowered and given equal opportunities, they can contribute significantly to the overall progress of a nation. Therefore, it is crucial for Burundi to address the gender gap and ensure that both men and women have equal access to education, healthcare, employment, and decision-making positions.

1. Challenges Faced

- **Lack of education:** Not educating girls and boys alike can lead to an increase in gender equality.

- **Violence:** Women in many developing countries suffer physical and also psychological violence by their partners. In these countries, due to the cultural framework, women may get married young, not be educated, be unemployed and most times they are weak-willed in terms of decisions that must be taken for their families or themselves. More analytically, the study showed that domestic violence is a global problem related to women's insecurity and taboos, irrespective of age and socioeconomic condition.
- **Social Norms:** The discrimination embedded in social institutions – laws, social norms and practices – is a key driver of this inequality, perpetuating gender gaps in education, employment and health, and hindering progress towards rights-based social transformation. The OECD's Social Institutions and Gender Index (SIGI) measures such gender discrimination across 179 countries.

These particular forms of discrimination are often invisible. Yet, failing to address discriminatory laws, attitudes, and stereotypes restricts the ability of women and girls to contribute to society and the economy.

2. Proposed Solutions and Methods to Overcome this Problem:

-First, step up investment in women's human capital. The gains from providing women equal access to food, healthcare, and education are especially large in emerging and developing economies.

-The second confirmed solution is enabling women to work outside the home or start their businesses. Reforms to taxation, public spending, financial infrastructure, and regulations, as well as labour markets can help.

-Providing access to quality and affordable childcare frees up more women to work and also creates jobs directly. A third area to tackle is biases. Out of 190 countries surveyed, the World Bank found that women were on equal legal standing with men in just 12 countries. Gender-based discrimination in social institutions costs the world economy \$6 trillion according to the Organisation for Economic Co-operation and Development. But in recent years, countries have reduced these costs through social and legal actions such as curbing underage marriage, criminalizing domestic violence, and increasing the number of female elected officials. Fourth, increasing the representation of women in leadership positions is also critical. IMF analysis shows that a greater presence of women in financial institutions and financial policymaking goes hand in hand with greater financial resilience. And in fintech firms and the corporate sector, more women in leadership are associated with better performance and profitability, respectively.

Economic and Social Applications:

- There can be no robust growth of the economy without gender equality, a critical ingredient of any strategy for durable, resilient and more inclusive growth. Invest in women boosts economic development, competitiveness, job creation and GDP. Persistent gender gaps can be often seen between women and men when comparing their education attainment, labour market participation, income and wage rates, provision of unpaid work and distribution of time.

-Reforming laws for gender equality paves the way for changing social norms and actions. And the result is not only women's empowerment but also a more resilient economy and stable society.

-Although there are more women than ever in the labour market, there are still large inequalities in some regions, with women systematically denied the same work rights as men. Sexual violence and exploitation, the unequal division of unpaid care and domestic work, and discrimination in public office all remain huge barriers.

-Countries with more room to improve gender equality have much to gain. On average, improved gender equality in these countries is expected to lead to an increase in GDP of about 12% by 2050. Reducing the gender gap in Science, Technology, Engineering, and Mathematics (STEM) education areas could help reduce the skills gap, increase employment and productivity of women, and reduce occupational segregation.

-Also, many countries are developing new policy approaches that more tailored support for growth-oriented women entrepreneurs. Women entrepreneurs encounter more difficulties than men in accessing the finance, credit, skills, technology, and networks they need to be successful in employment. These include dedicated business incubator and accelerator programmes for women entrepreneurs and building dedicated risk capital infrastructure. However, policy needs to do more to cultivate women's entrepreneurial aspirations, address market failures in the areas of skills and finance, and improve access to networks and support for growth-oriented entrepreneurs.

4.6 Relation with Sustainable Development:

“Ending all discrimination against women and girls is not only a basic human right, it's crucial for a sustainable future” states the United Nations Development Programme(UNDP).

Climate change and disasters continue to have a disproportionate effect on women and children, as do conflict and migration. Enact reforms for women's equal economic rights, including property ownership, land control, financial services access, inheritance, and natural resource entitlement, adhering to national laws plays a crucial role in achieving sustainable development all around the world. In Europe and Central Asia, gender inequalities endure in accessing decent work and income. Women undertake over twice the unpaid care and domestic work compared to men, limiting their income-generating opportunities. The gender gap in

labour force participation averages around 20 percent in the region, with women encountering various hurdles in career advancement and earning, on average, 30 percent less than men.

5. Methods

UNDP promotes gender equality in sustainable development and economic growth by implementing job creation programs, advocating for legal frameworks for women's economic empowerment, supporting the recognition and reduction of women's unpaid work, aiding women-led enterprises, researching gender equality initiatives, advocating for policies in the green economy, establishing the STEMinists Network, and providing resources for women in STEM.

6. Results

In simple words, this goal aims to achieve the following results after implementation:

1. End discrimination against women and girls
2. Eliminate all forms of violence, including trafficking and exploitation.
3. Eradicate harmful practices like child marriage and female genital mutilation
4. Ensure women's full participation and equal opportunities in decision-making
5. Recognize and value unpaid care work through public services and shared responsibility within households
6. Ensure universal access to sexual and reproductive health and rights.
7. Reform to grant women equal rights to economic resources, ownership, and control.
8. Use technology to empower women.
9. Adopt and enforce policies for gender equality and women's empowerment at all levels.

7. Conclusion:

Sustainable Development Goal 5: Gender Equality is the most significant of all. We know that women make up about 49.6% of the population. Therefore, we can understand that this goal is essential for bringing justice to women from around the world. It throws the spotlight on the various events that occur in the life of a woman:

1. Discrimination against girls and women;
2. Domestic violence, trafficking and other forms of exploitation;
3. Domestic care that goes unvalued and unpaid;
4. Unequal opportunities of leadership and participation in the political, public and economic fields;
5. The access to having sexual and reproductive health and reproductive rights; and various others

To provide justice to women so that they can live a healthier and peaceful life without having to face such oppressions, it is important that we make gender equality our number-one priority.

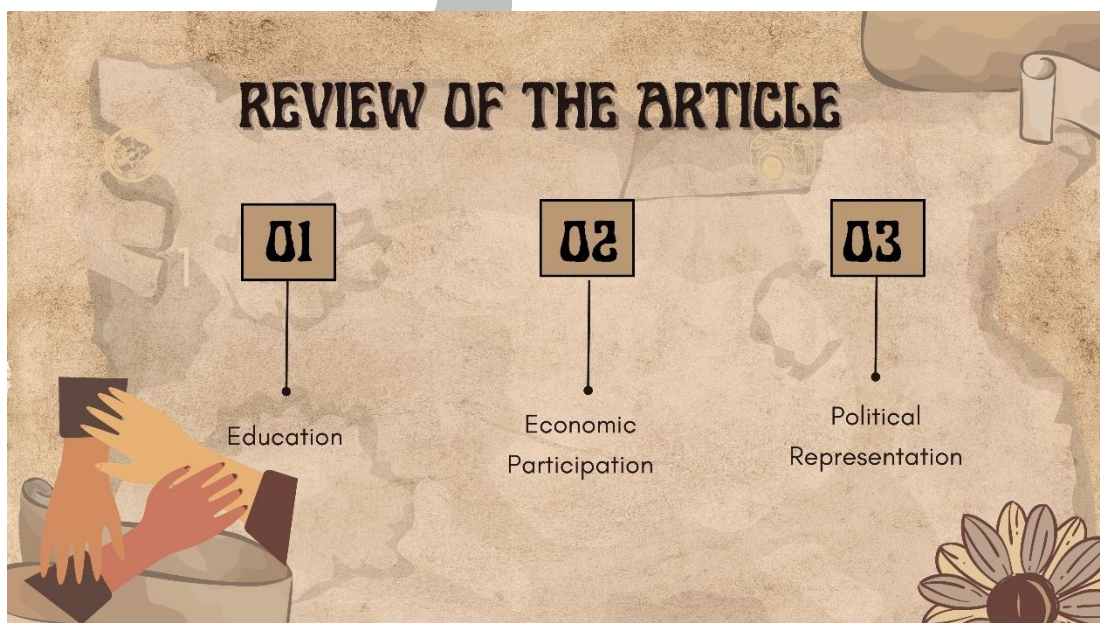
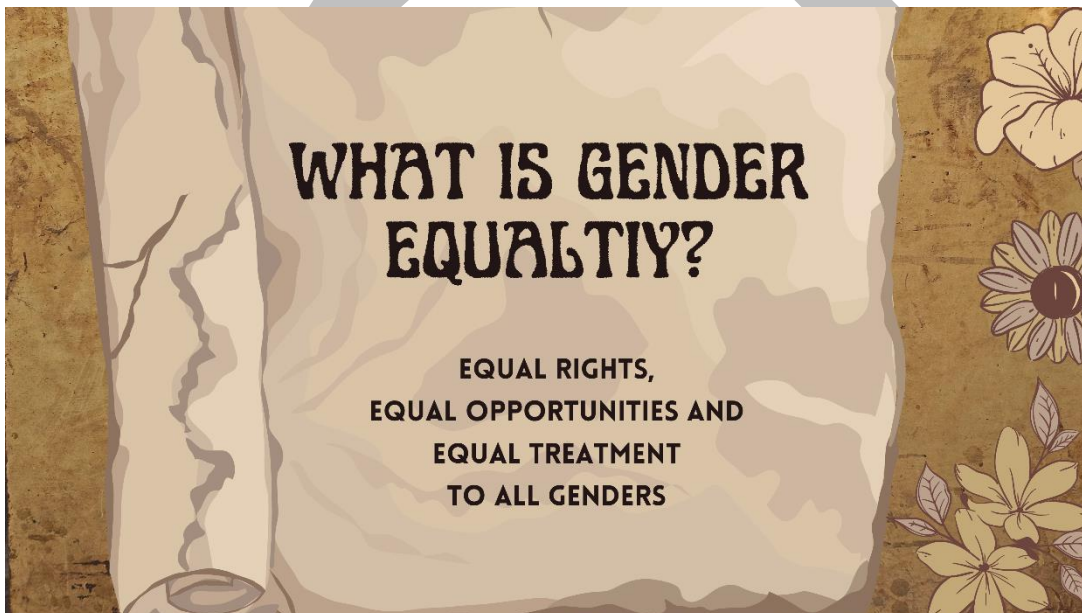
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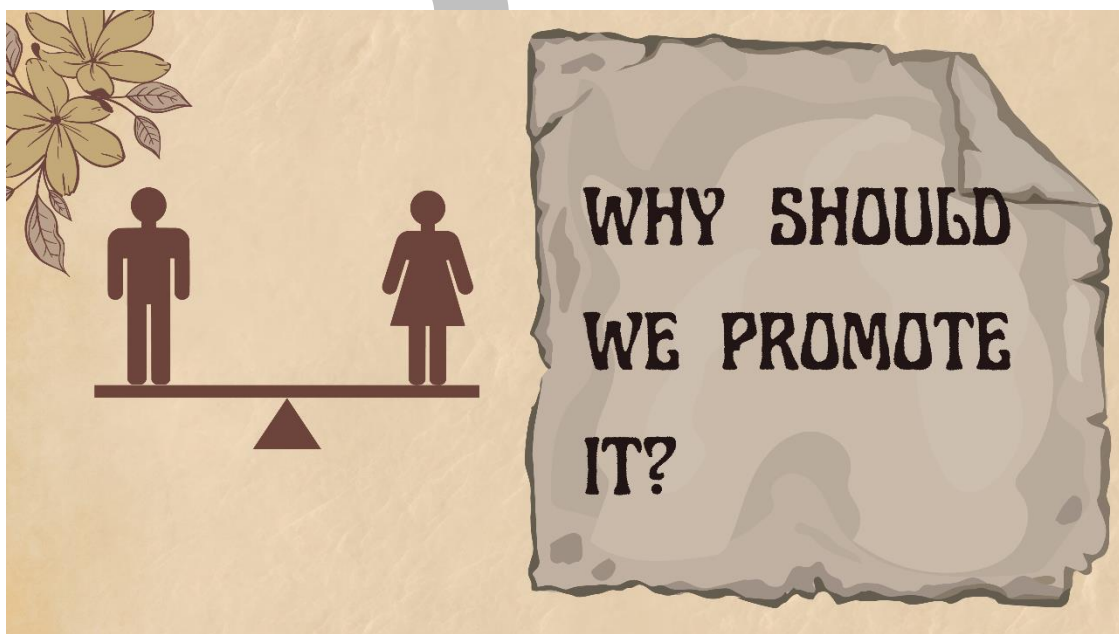
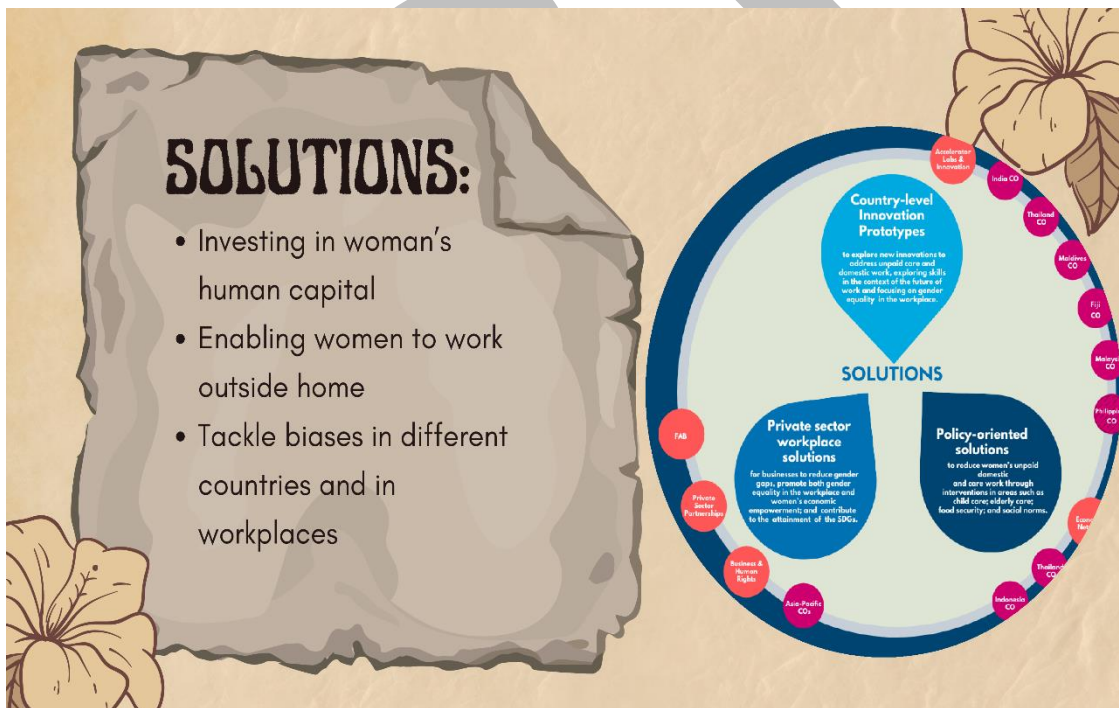
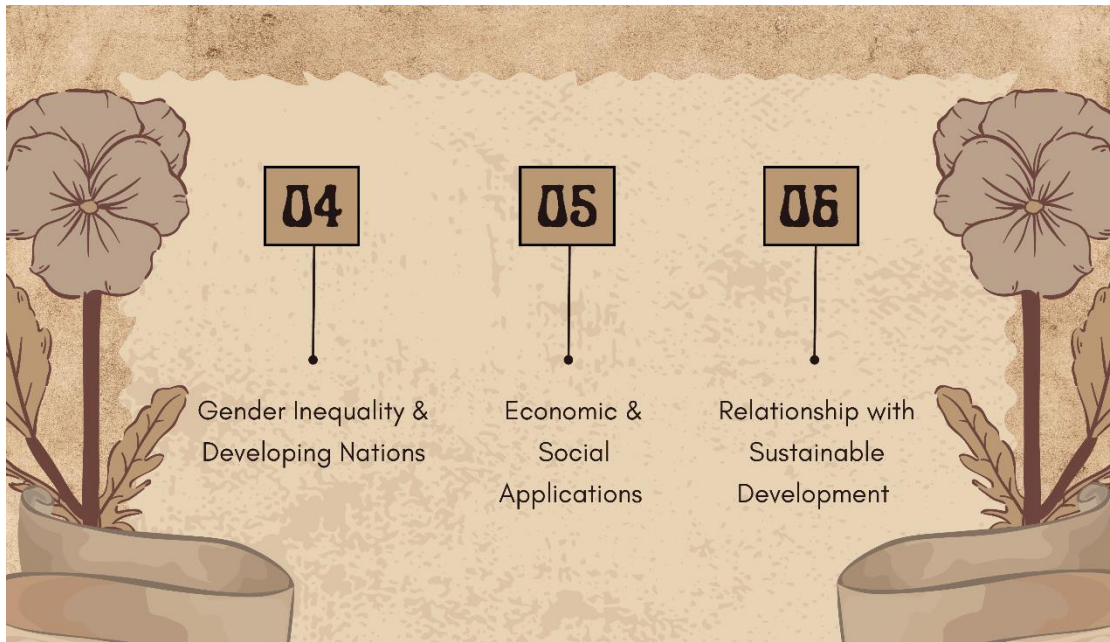
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POWERPOINT PRESENTATION





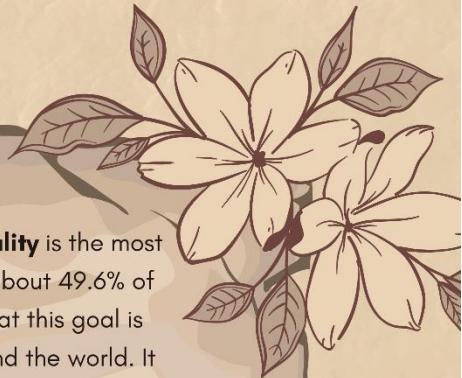
MAIN OBJECTIVES OF SDG 5:

- End Discrimination against women and children
- Eliminate all kinds of violence against women
- Eradicating harmful practices like child marriage
- Ensure women's participation in decision-making
- Ensure universal access to sexual and reproductive rights
- Use technology to empower women and grant access to resources and facilities
- Adopt and enforce policies for women's equality
- Eradicate work-place biases against women and give equal pay.



CONCLUSION

Sustainable Development Goal 5: Gender Equality is the most significant of all. We know that women make up about 49.6% of the population. Therefore, we can understand that this goal is essential for bringing justice to women from around the world. It throws the spotlight on the various events that occur in the life of a woman. Therefore, in order to provide justice to women so that they can live a healthier and more peaceful life without having to face such oppression, it is important that we make gender equality our number-one priority.



THANK YOU



TEAM - II

Prasanna Adhithya Balagopal, Saksham Uboweja, Gouri Menon

School - GEMS Modern Academy, Dubai

Topic: Affordable and Clean Energy

Abstract:

The purpose of this study is to analyze the role of Quantum Dots in enhancing the longevity, performance, and stability of lithium-ion batteries (LIBs). Quantum Dots (QDs) increase productivity of LIBs by increasing charge separation efficiency. They are sustainable as they are environmentally friendly and biocompatible. Thus, QDs satisfy Sustainable Development Goal 7: Affordable and Clean Energy. QDs are manufactured by mixing metal salts and ligands in solvent, under specific heat conditions. Precursors include Cadmium Selenides and Tellurides. Following synthesis and passivation of mixture, sequenced QDs are used in LIBs. Using Graphene Oxide QDs (GOQDs) offers high ionic conductivity, and exhibits 100% retention after 500 charge-discharge cycles. The affordability and renewability of ZnO QDs are promising as electrode materials for LIBs. Research shows that it's possible to recharge LIBs within 30 seconds using QDs. This research unfolds the investigation of maximizing the potential of QDs for a future of Clean and Affordable Energy.

Keywords:

Quantum Dots ; Lithium Ion Batteries ; Precursors ; Passivation ;

Graphene Oxide Quantum Dots ; Charge-Discharge Cycles ; Clean and Affordable Energy ; Charge Separation Efficiency

Research Article

Introduction

As the world endures the negative effects of climate change, and slowly begins to affect positive change, the industry and sector of renewable energy, and energy as a whole has become the spotlight topic, discussed not only by world leaders and organization heads, but also by industry pundits. Decarbonized clean energy is the way to move forward in the era of sustainable development, and this means adopting methods such as Solar Energy, Wind Energy, Geothermal Energy as well as Hydroelectric Power, as this combats Climate Change but also meets the demand of energy. However, the electricity produced by these means have to be stored in batteries, and in order to increase the lifespan of such batteries as well as their efficiency in charging and discharging, Quantum Dots can be utilized.

Quantum Dots, also referred to as semiconductor nanocrystals, are particles having the ability to behave as a semiconductor. These particles are only a few nanometers in length but have various useful properties which we will be looking to maximize in the day to day world, in pursuit of fulfilling and satisfying Sustainable Development Goal 7 : Affordable and Clean Energy. The electrons in Quantum Dots, just like any other atom, become excited to a higher state of energy if illuminated by an Ultraviolet Light. The efficiency and conductive nature of Quantum Dots, lies in the fact that the electron, upon being excited, experiences a transition from the valence shell to the conductance shell.

Quantum Dots have a few other properties which makes them a great fit for sequential use in batteries. They have a very high electrochemical energy storage as a result of their large specific surface area as well as adjustable size. Moreover Quantum Dots are classified as point-like or zero dimensional entities which allows for large numbers to be conjoined in smaller spaces. Most of the properties that Quantum Dots manufactured by different precursors and methods possess are similar, but are not the same as these depend on the dimensions and material from which they are made. They also have a short electron transfer path which means that it is very easy to move an electron out of a Quantum Dot into an adjacent one, as we know that the flow of current is opposite to the flow of electrons, thus this transfer induces current to be generated in its opposite direction. Moreover, Quantum Dots are non toxic in nature, have optical characteristics which can also be used in the communications sector, and the preparation cost is extremely low per unit, thus making this field of study a no-brainer for implementation

Review of Issue

According to the UN, the Energy Supply Sector and the Transportation Sector are two of the biggest contributors to global warming, with the Energy Supply Sector comprising roughly 31% of the total greenhouse gas emissions. If the rise in global temperatures is to be limited to being under 1.5oC above pre-industrial levels (in accordance with the Paris Agreement), global emissions would need to be reduced by approximately 45% by the year 2030. In order to

achieve these goals, strong global unity towards a sustainable future as well as the aid of groundbreaking innovation would be of paramount importance.

One such innovation is that of Electrical Vehicles (EVs). Switching to an Electric Car would help in reducing emissions, improving air quality, and boosting jobs in the green sector. If we achieve a 60% share of battery-electric and plug-in hybrid vehicles on the road, we could prevent more than 60 billion tonnes of CO₂ from being emitted between now and 2050. QDs would be of significant help in increasing the presence, performance, and stability of LIBs - what electric cars run on.

Quantum Dots (QDs) are currently being used in next-generation displays and photovoltaics, but they are not extensively used in battery technology yet. However, in recent years, with global warming causing catastrophic environmental problems and catastrophes, QDs have started to attract extensive attention in the field of electrochemical energy storage due to their large specific surface area, non-toxicity, adjustable and easy surface functionalization - factors that help QDs to be used in batteries to store intermittent sources of energy (Wind Energy And Solar Energy) (Xu et al. 2022). Thanks to their high reversibility (the capacity that is available to the load after the electrode is formed), low cost, and high safety, novel ZnO (Zinc Oxide) quantum dot (ZnO-QD)/carbon composite are showing great promise as electrode potential for LIBs. Research has also shown that these semiconducting metal nanoparticles (QDs), when added to LIBs, make it possible to recharge the LIB in just 30 seconds. Furthermore, graphene oxide quantum dots (GOQDs) can also be used to enhance the Li⁺-ion mobility of a gel polymer electrolyte (GPE) for lithium-ion batteries (LIBs) and even allow the battery to exhibit full capacity retention. Most importantly, QDs are sustainable thanks to their non-toxic and biocompatible nature.

However, despite the great promise shown by QDs, there are some research gaps in their longevity, performance, overall stability and the deployment of the ideal sustainable production method for QDs. For instance, the fast charging shown by Iron pyrite QDs and LIBs only works for a few cycles before the QDs start to react with the electrolyte and the first

recharging stops working; in ZnO QDs, direct evidence on the role played by the carbonaceous component, which is essential for the rational design of these nanomaterials with optimal electrochemical performance, is still missing (Fernando et al. 2019) ; QDs are still plagued with inefficiencies in terms of energy conversion and storage; and although they do show efficiency in small quantities, their impact and ability at a larger scale is still unknown. This study aims to show the current progress of QDs in terms of their longevity, performance and stability, so that they can be used as electrodes for LIBs.

Methodology

Manufacture of Carbon Quantum Dots

Ethanol(C_2H_5O) is the primary reactant in the manufacture of Carbon QDs.

50 ml of ethanol is measured in a graduated cylinder and poured into an Erlenmeyer Flask. An additional 49.5 ml of ethanol is measured using the graduated cylinder into which 0.5 ml of distilled water is added using a Pasteur Pipette. This mixture is then added into the flask. A magnetic stirrer is added to the center of the flask. Separately, 0.3g of anhydrous NaOH is weighed using a scale and added into the flask. The stirrer is set at 750 rotations per minute and the mixture is stirred till NaOH is completely dissolved.

Once the solution is ready, 50 ml of the solution is poured into a 100 ml beaker. Carbon rods separated by 1 inch and connected to a power supply are then submerged into 30 ml of the solution. The power supply and multimeter are turned on with the current set at 30 mA and the experimental setup is left undisturbed for 2 hours. The resulting solution is poured into 25 ml vials which is then left to age for 2 days.

Upon aging, the solution acquires a yellowish-orange color. For filtering the solution, a chromatographic column with cotton in the bottom is used. 30 ml of silica gel is measured using a graduated cylinder and is transferred to a small beaker. Next, 30 ml of diethyl ether($C_4H_{10}O$) is measured and is slowly poured into the silica gel as the reaction is exothermic in nature and is mixed well. 10 ml of petroleum ether(C_6H_{14}) is measured and added into the silica gel-diethyl ether solution. This solution is then poured into the chromatographic column. After the column valve is opened, low pressure nitrogen gas is

forced into the column. A small beaker is kept below the column to collect the draining ethers. The drained ethers are poured back into the column and the step is repeated again.

The aged QDs are poured into the column and nitrogen gas is used to aid the filtering process. After the column is completely orange, the beaker below is switched with new vials to collect the filtered QDs. After the solution stops dropping, the nitrogen gas is removed and the remaining silica gel is transferred into a ziplock bag. The filtered carbon QD vials are then left in a fume hood for a day to evaporate the ethers. (Pelayo et al. 2016)

Collection of Quantum Dots

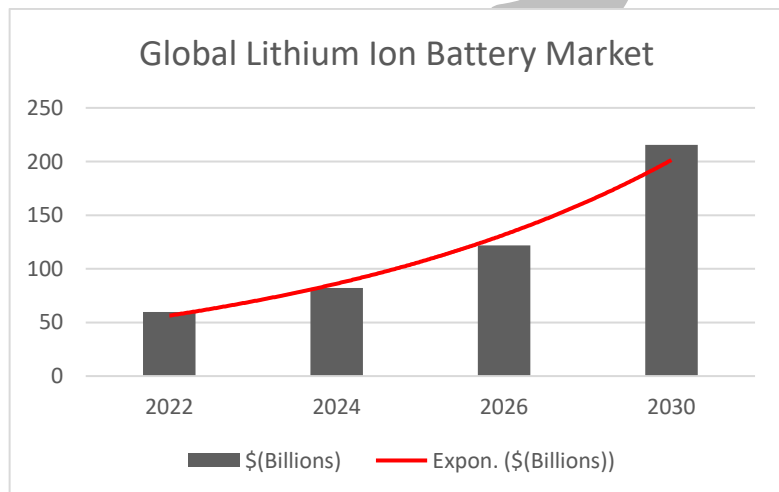
The filtered carbon QD vials are placed in a centrifuge at high speeds, the QDs which are denser settle to the bottom of the tube. QDs can also be separated using a binary gradient elution with acetonitrile-methanol(C_3H_7NO) and acetonitrile-water($C_2H_7NO_2$). The mobile phases as well as acetonitrile play a crucial role in separating Carbon QDs. (Pelayo et al. 2016)

Storage of Quantum Dots

Quantum Dots are ideally meant to be stored in a dark room or at a temperature of 4 degrees celsius as they are sensitive to the air and should not be exposed to it for long periods of time as its optical properties may get altered. (Pelayo et al. 2016)

Data Collection

Global Lithium-Ion Battery Market



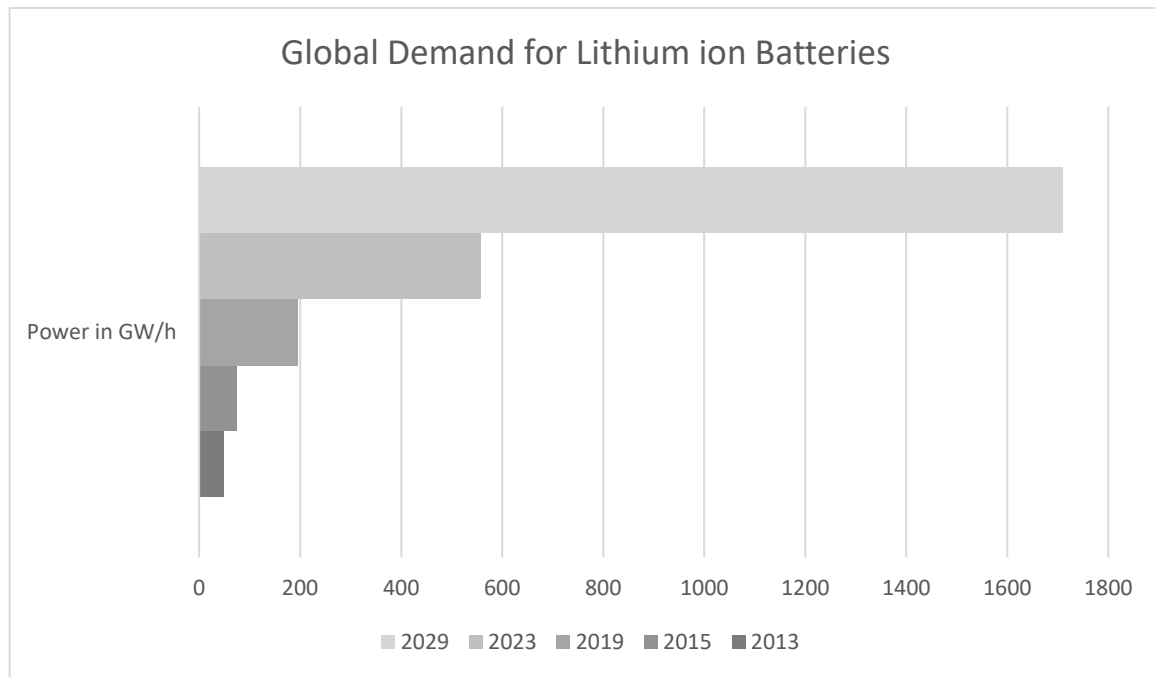
Results

Following the collection and storage of Quantum Dots, stable samples can now be implemented in Lithium Ion Batteries. Implementation is by means of sequencing of Quantum Dots in a specific manner, thus causing them to be conjoined in a chain. Although precisely engineered Quantum Dots are smaller than the ones manufactured by the process detailed in this study, both can be sequenced for efficient use in energy storage. Quantum Dots possess the ability of allowing very low levels of excitation, thus meaning that they can be strung together in a chain and lattice-like structure. In many batteries, Lithium is used as the anode, with a separate in between the anode and cathode, where this separator is selectively permeable. This allows for the lithium ions to transfer charge, and over time, via liquid to liquid conversion through the electrolyte, causes voltage to gradually decrease due to electrochemical polarization difference between the cathode and anode, thus reducing the Resistance offered by the battery which is termed as Internal Resistance. In an elementary level, the formula $V = IR$ can be used, where V a R (directly proportional), thus meaning that if Voltage decreases, Resistance decreases and Current flowing increases to main equilibrium thus allowing for more efficiency. The lattice of quantum dots acts as a connector or bridge between low and high conductivity in a quantum structure inside the electrolytic chamber of a LIB.

Discussion

The usage of carbon quantum dots in lithium ion batteries can prove to be helpful in various sectors. In the engineering sector, more powerful batteries can be manufactured to carry out various purposes. Using quantum dots in lithium ion batteries further increase the energy density, making the LIBs last for longer periods of time and release more energy. Quantum Dots improve the deintercalation rate of lithium ion batteries. In today's world, petroleum based vehicles are quickly being replaced by electric vehicles. Using quantum dots in LIBs increases the lifespan of these batteries thereby effectively reducing the cost of maintenance of electric vehicles and even reducing the cost of purchasing them. Furthermore, using

quantum dots in lithium ion batteries makes it possible to manufacture more batteries of the same capacity, thereby increasing the availability of the most fundamental component for electric vehicles. With increased performance and stability, the expected lifespan of a lithium ion battery would change from 7-13 years to perhaps 20+ years. This makes it environmentally friendly, sustainable and cost efficient.



Conclusion

The ongoing research on quantum dots hints at the possibility of increasing the efficiency of the production of QDs at a large scale, potentially being able to deal with the problem of scalability of QDs. Researchers at the University of Vanderbilt have also shown great progress in the strong ability of Iron-Pyrite QDs to recharge LIBs. Additionally, 100% retention after 500 charge-discharge cycles of GOQDs would help bolster the current performance and stability of modern-day LIBs, ranging from small appliances to Electric Vehicles (Chen et al. 2018). However, the storage process of QDs needs to become more optimized, if it has to reach a wider demographic. Although QDs are a promising innovation, more research about streamlining their production process and their overall compatibility with LIBs needs to be studied more.

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POWERPOINT PRESENTATION

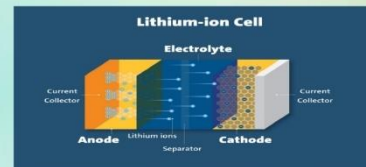
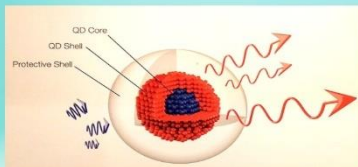
The Use of Quantum Dots in Progressive Upgrades in the Longevity, Performance and Stability of Modern Generation Lithium Ion Batteries

Prasanna Adhithya Balagopal ; Gouri Menon ; Saksham Uboweja



Abstract of the Research

Keywords	Quantum Dots	Lithium Ion Batteries
Precursors	Passivation	Graphene Oxide Quantum Dots
Charge-Discharge Cycles	Clean and Affordable Energy	Charge Separation Efficiency

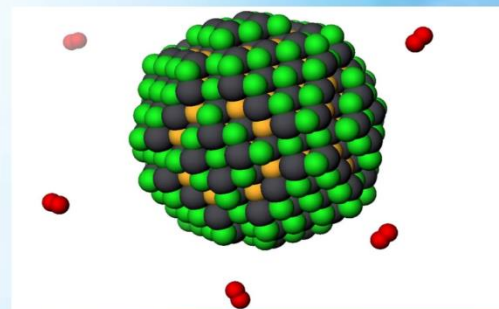


Introduction

Research Question

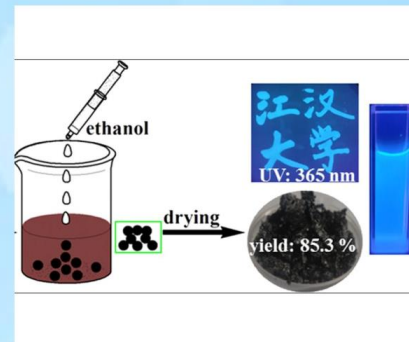
How can Quantum Dots be utilised in improving the efficiency of energy storage to help ensure access to reliable and affordable energy sources

- Quantum Dots (QDs)
- Properties of Quantum Dots
- Pros of Using Quantum Dots
- Financial and Chemical Feasibility



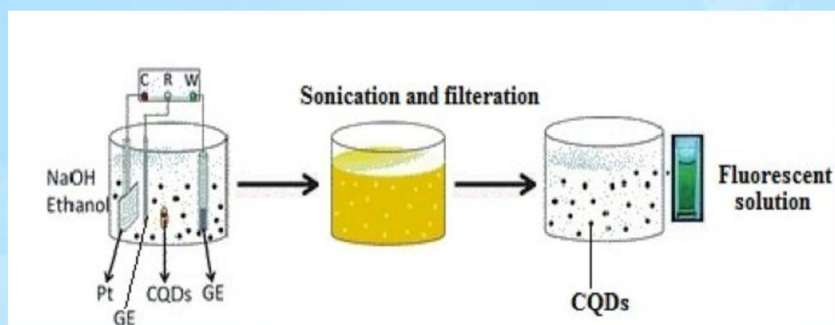
Preparation

- Ethanol(C_2H_5O) is the primary reactant in the manufacture of Carbon QDs.
- An additional 49.5 ml of ethanol is measured into which 0.5 ml of distilled water is added. 0.3 g of NaOH is added into the flask.
- The mixture is stirred using a magnetic stirrer.
- Once the solution is ready, 50 ml of the solution is poured into a beaker.
- Carbon rods connected to a power supply are then submerged into 30 ml of the solution. The power supply and multimeter are turned on with the current set at 30 mA and the experimental setup is left undisturbed for 2 hours.



Preparation contd..

- To filter the solution, a chromatographic column with cotton in the bottom is used. 30 ml of silica gel is measured using a graduated cylinder and is transferred to a small beaker. 30 ml of diethyl ether($C_4H_{10}O$) is measured and is slowly poured into the silica gel.
- 10 ml of petroleum ether is added into the silica gel-diethyl ether solution. This solution is then poured into the chromatographic column.
- The aged QDs are poured into the column and nitrogen gas is used to aid the filtering process. After the column is completely orange, the beaker below is switched with new vials to collect the filtered QDs.



Review of the Issue

- Quick and innovative solutions are needed such that the goals of the Paris Agreement are met.

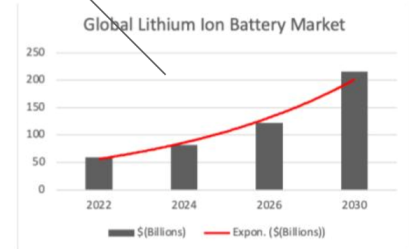
What we Know:

- Show promise in enhancing the safety and longevity of LIBs.
- Iron Pyrite QDs have proven their quick recharge capabilities
- Helpful in bolstering the storage of solar and wind energy.

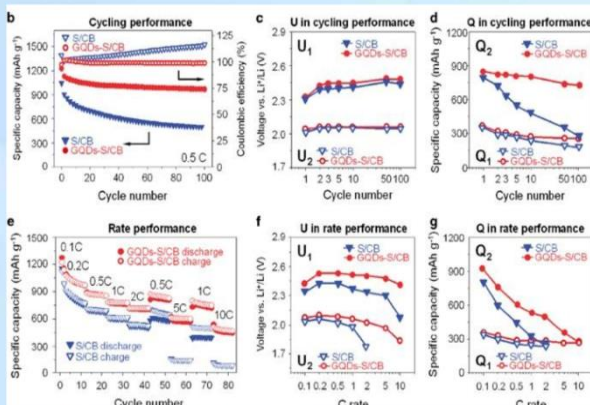
Research Gaps:

- Presence hasn't become very extensive yet.
- They lose their efficiency in just 30 cycles.
- Their safety and longevity at a large scale are yet to be proven.

Global Demand for LIBs



Conclusion



- The ongoing research on quantum dots hints at the possibility of increasing the efficiency of the production of QDs at a large scale, potentially being able to deal with the problem of scalability of QDs.
- The researchers at the University of Vanderbilt have shown some promise in improving the efficiency of Iron-Pyrite QDs, making them last more than 30 cycles.
- Modern Methods like Lean Production are to be prioritized so that QDs can have a wider reach and also make LIBs more affordable, even for economically-backward countries.

TEAM - III

Abhinaya Kavasheri , Sujith Singam, Miftha Ul Jannath
School- Jain Heritage a Cambridge School, Shamirpet, India

Topic: Good Health and Well Being

Abstract

The abstract explores the relation between good health and well-being under UN's sustainable development goal number three. The practice emphasizes holistic approach which goes beyond the established medicine paradigms. It is a total perspective on health which encompasses aspects such as socio-economic backgrounds, environmental determinants, and the personal behavioural health status of a person. This interdisciplinary approach will draw from epidemiology, psychology, public health and sociology among other sub disciplines. This approach centres on comprehensive healthcare, mental health promotion, social welfare, equality and inclusiveness. It has proposed health as a complete status and has incorporated its physical, mental, and social aspects while putting into consideration preventative healthcare. This will foster resilience and sustainable wellness in the perspective of universalism and equitable social distribution. The approach will lead to informed decisions that will be geared towards pushing forward the global commitments towards good health and well-being for all within the context of sustainable development.

Keywords: Sustainable development goal; well-being; public health; social welfare; health care.

Research Article

1. Introduction

The Sustainable Development Goals (SDGs), also known as the Global Goals, were decided by the United Nations in 2015, stemming from the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. This comprehensive set of 17 interconnected global objectives includes No Poverty, Zero Hunger, Good Health and Well-being, Quality Education, Gender Equality, Clean Water and Sanitation, Affordable and Clean Energy, Decent Work and Economic Growth, Industry, Innovation, and Infrastructure, Reduced Inequality, Sustainable Cities and Communities, Responsible Consumption and Production, Climate Action, Life Below Water, Life on Land, Peace, Justice, and Strong Institutions, and Partnerships for the Goals. These goals serve as a resounding call to action, seeking to eradicate poverty, address gender inequality, and protect our planet to ensure that all citizens can coexist in harmony and peace.

Each goal conveys a profound message to people around the world. They were meticulously designed to tackle a wide spectrum of social, economic, and environmental challenges that our planet faces. The SDGs are an integral part of the 2030 Agenda for Sustainable Development, a framework that strives to foster prosperity while safeguarding the environment. These goals aspire to bring about a more just, equitable, and sustainable world by the year 2030.

2. Review of the issue

2.1 Sustainable Development Goal3 (SDG3):

Among 17 SDGs, SDG3 specifically focuses on "Good Health and Well-being" and is aimed at ensuring healthy lives and promoting well-being for all at all ages (<https://www.globalgoals.org/goals/3-good-health-and-well-being>). SDG3 distinguishes that health is a primary human right and a very important for overall well-being, economic development, and poverty reduction. Good health is interconnected with other development goals, including those related to education, gender equality, poverty reduction, and sustainable cities and communities. The goal emphasizes the importance of reducing health inequalities and promoting health equity, ensuring that everyone, regardless of their circumstances, has the opportunity for a healthy life. It also acknowledges the importance of pandemic preparedness and response, especially in the wake of global health crises like the COVID-19 pandemic.

2.2 Sustainable Development Goal3 role:

SDG3 plays a crucial role in promoting the well-being of individuals, communities, and nations. Achieving the targets outlined in SDG3 is essential for improving the quality of life and ensuring that people can live healthy and productive lives while addressing the pressing global health challenges. There are several reasons why SDG3 is an important and essential goal (<https://jointsdgfund.org/sustainable-development-goals/goal-3-good-health-and-well-being>).

- i) **Human Health:** Health is a fundamental human right, and it is crucial for people to lead productive and fulfilling lives. SDG3 aims to address a wide range of health issues, from reducing maternal and child mortality to combating major diseases such as HIV/AIDS, malaria, and non-communicable diseases like cancer and diabetes.
- ii) **Global Health Challenges:** Many countries around the world face significant health challenges, including epidemics, inadequate access to healthcare, and poor sanitation. SDG3 seeks to address these challenges and promote the health and well-being of people in both developed and developing nations.
- iii) **Economic and Social Development:** Good health is closely linked to economic and social development. When people are healthy, they can be more productive, which contributes to economic growth and poverty reduction. Additionally, health impacts education, productivity, and overall well-being.
- iv) **Reducing Health Inequalities:** SDG3 emphasizes the importance of ensuring that health services and outcomes are accessible and equitable for all, regardless of age, gender, income, or location. It seeks to reduce health disparities and promote health equity.
- v) **Pandemic Preparedness:** The ongoing COVID-19 pandemic has highlighted the need for global preparedness and response to health crises. SDG3 aims to strengthen health systems and improve the ability of countries to respond to outbreaks and pandemics.

- vi) **Environmental Health:** The goal also addresses environmental factors that impact health, including air and water quality, as well as access to safe and clean drinking water and sanitations.
- vii) **Life Quality and Well-being:** Beyond addressing diseases and health disparities, SDG3 promotes the general well-being and quality of life for individuals. This includes mental health, which is increasingly recognized as a critical component of overall well-being.
- viii) **Life Quality and Well-being:** Beyond addressing diseases and health disparities, SDG3 promotes the general well-being and quality of life for individuals. This includes mental health, which is increasingly recognized as a critical component of overall well-being

2.3 SDG3 interconnection with other SDGs

SDG3 is interconnected with other SDGs, such as those related to poverty eradication (SDG1), quality education (SDG4), gender equality (SDG5), clean water and sanitation (SDG6), and more (Guégan et al., 2018; Fernandez, 2020). Achieving good health and well-being is not only a goal in itself but also contributes to the achievement of many other sustainable development objectives.

3. Discussions

3.1 SDG3 improvement in India

India, like many other countries, has made efforts to work towards achieving SDG3, which focuses on ensuring good health and well-being for all. Progress and initiatives related to SDG3 in India. It's important to note that while India has made progress in various aspects of SDG3, there are still challenges, including disparities in healthcare access, the need for continued investment in healthcare infrastructure, and the management of diseases. Achieving the full realization of SDG3 in India will require sustained efforts, investments, and continued collaboration among government agencies, non-governmental organizations, and the private sector. Additionally, addressing the social determinants of health and promoting health equity will be essential for achieving the goals of SDG3 in India (Sundararaman and Ranjan, 2019).

- i) **Maternal and Child Health:** India has made progress in reducing maternal and child mortality rates. Initiatives like the National Health Mission have aimed to improve access to maternal and child healthcare services, and there has been a significant increase in institutional deliveries
- ii) **Immunization:** India has implemented one of the world's largest immunization programs to protect children against preventable diseases. The Universal Immunization Program (UIP) has been crucial in this effort.
- iii) **Disease Control:** India has undertaken various disease control programs. For example, efforts to combat diseases like Tuberculosis, Malaria, and HIV/AIDS have

been ongoing. The country has also been working on the elimination of diseases like polio and has made significant progress.

- iv) **Access to Healthcare:** While India has made strides in improving healthcare infrastructure and access, challenges related to equitable healthcare access remain. There are disparities between urban and rural areas and variations among states.
- v) **Mental Health:** India has recognized the importance of addressing mental health issues. Initiatives to raise awareness about mental health and expand mental health services have gained traction.
- vi) **Sanitation and Clean Water:** Access to clean water and sanitation is crucial for good health. The Swachh Bharat Abhiyan (Clean India Campaign) has worked towards improving sanitation and hygiene across the country.
- vii) **Environmental Health:** India has been working to address environmental factors that impact health, such as air pollution and water pollution. These issues affect the health and well-being of the population.
- viii) **Pandemic Preparedness:** The COVID-19 pandemic prompted significant efforts in India to control the spread of the virus, provide healthcare services, and develop and distribute vaccines.
- ix) **Healthcare Infrastructure:** India has been investing in expanding healthcare infrastructure, including building new hospitals and improving healthcare facilities and by also encouraging digital health solutions to make health care facilities more convenient and simpler than before
- x) **Public-Private Partnerships:** The government has also encouraged public-private partnerships in healthcare delivery to enhance access to quality healthcare services.

3.2 Sustainable Development Goal3 core objectives

The core objectives of SDG3 can be ascribed as follows;

- i) **Maternal and Child Health:** Reducing maternal and child mortality rates through improved healthcare and access to essential services
- ii) **Disease Control:** Combating major diseases such as HIV/AIDS, malaria, and non-communicable diseases like cancer and diabetes
- iii) **Universal Health Coverage:** Achieving universal health coverage to ensure that all individuals have access to quality healthcare services without facing financial hardships
- iv) **Environmental Health:** Addressing environmental factors affecting health, such as clean drinking water, sanitation, and air and water quality.
- v) **Mental Health and Well-being:** Promoting mental health awareness and addressing mental health disorders and suicide rate. Its goal is to decrease suicidal rate and promote mental health and spread awareness as many parts of the world are neglecting mental health.

3.3 Expected outputs of SDG3

The expected outputs of SDG3 are centered around improving health and well-being worldwide. Some of the key expected outputs of SDG 3 are Reduction in Maternal Mortality, Reduction in Child Mortality, Universal Health Coverage, Control of Epidemics, Non-Communicable Disease Prevention, Mental Health Services, Health Workforce Strengthening, Access to Safe and Effective Medicines, Health Research and Innovation, Improved Sanitation and Hygiene, International Health Cooperation, Health Education and Promotion. The expected outputs of SDG 3 aim to create a world where everyone has the opportunity to lead a healthy and fulfilling life, and where preventable deaths and diseases are minimized through comprehensive healthcare systems and improved health practices. These outputs contribute to the broader agenda of sustainable development by promoting good health and well-being as a fundamental human right and a cornerstone for economic and social progress.

4. Conclusion

SDG3 recognizes that health is a fundamental human right and an essential component of overall human development and well-being. It underscores the interconnectedness of health with other development goals and emphasizes the importance of reducing health inequalities and promoting health equity. Ultimately, SDG3 serves as a global call to action, urging nations, organizations, and individuals to work together to improve healthcare access, reduce disease burdens, and elevate the quality of life and well-being for people worldwide. By achieving the targets of SDG3, we move closer to a more sustainable and equitable world where health and well-being are accessible to all.

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POWERPOINT PRESENTATION

Good Health and Well-being



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SDGs

Sustainable Development Goals



SUSTAINABLE DEVELOPMENT GOALS

- The Sustainable Development Goals (SDGs) aim to transform our world. They are a call to action to end poverty and inequality, protect the planet, and ensure that all people enjoy health, justice and prosperity.



Goal 3: GOOD HEALTH&WELL-BEING

“Ensure healthy lives and promote well-being for all at all ages.”

INTRODUCTION:

- The health goal (SDG 3) is broad: 'Ensure healthy lives and promote well-being for all at all ages'. The SDG declaration emphasizes that to achieve the overall health goal, 'we must achieve universal health coverage (UHC) and access to quality health care. No one must be left behind'.

PROJECT OVERVIEW

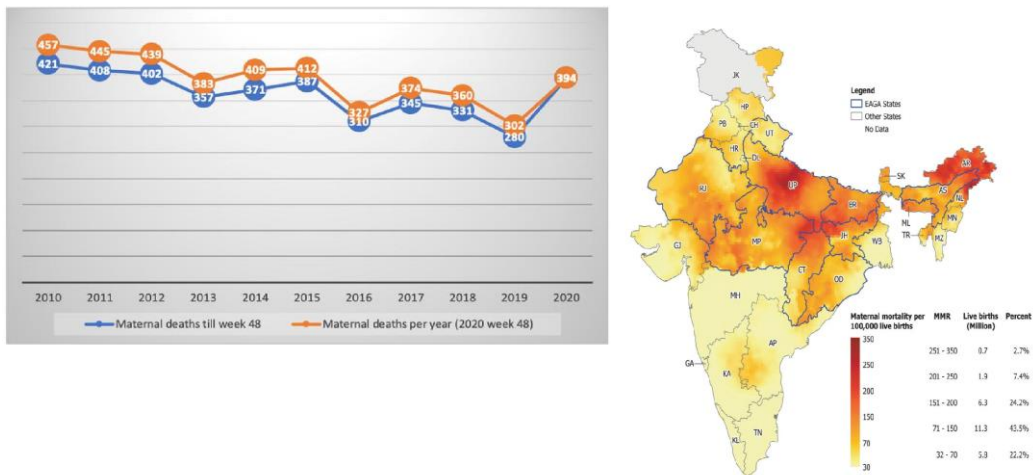
- Our project focuses to improve the health and well-being of our community through the multi-faceted approach. There are few different approaches which will help us to attain our SDG3 goal. There are few key components as follows.

OBJECTIVES:

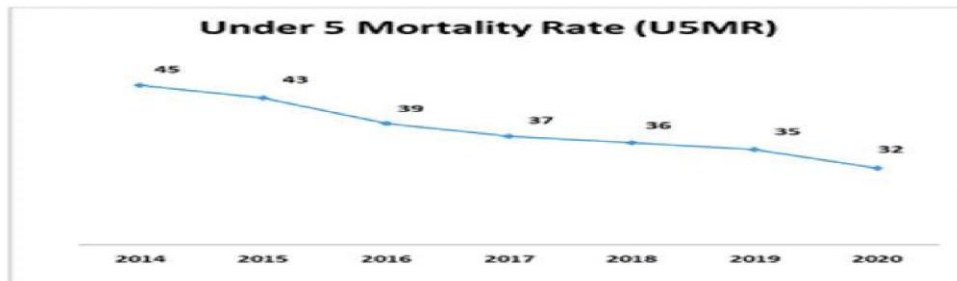
- Enhance access to quality healthcare services.
- Promote preventive healthcare measures.
- Foster mental health awareness and support.
- Ensure inclusivity and equity in health services.
- Strengthen global partnerships for health.
- Community Health Clinics.
- Digital Health Solutions.
- Nutrition and Food Security.
- Water, Sanitation, and Hygiene (WASH).
- Maternal and child health care.

TARGETS ACCOMPLISHED

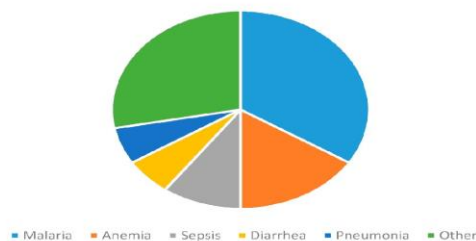
1. Reduce maternal mortality:



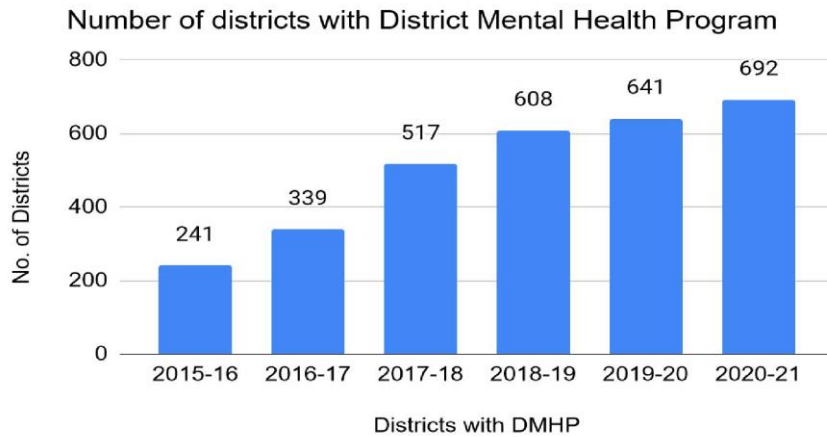
2. UNDER FIVE MORTALITY RATE



Causes of Death in the Under-5 Population

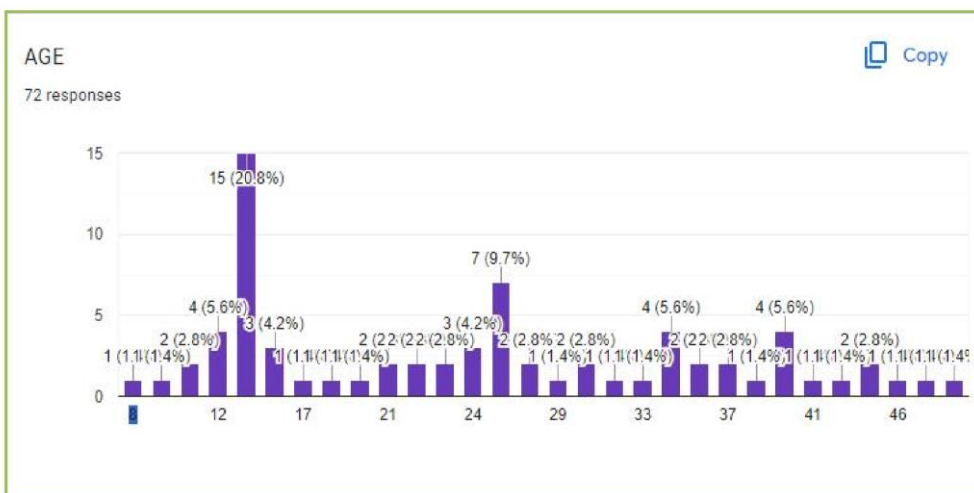


3. MENTAL HEALTH



SURVEY

The survey was done on mental health and well being by using GAD -7 tool



HYPOTHESIS OF THE PROJECT

- Our project seeks to achieve several key outcomes, aligning with the targets and indicators of SDG 3:
- Greater health literacy and community awareness.
- Enhancing access to necessary health care services, especially to marginalized groups.
- Better community members' mental health and well-being.
- Towards a sustainable and just local food system.
- Benefits like reduction in disease prevalence and improved health lifestyles can be measured.

SDG3 IMPROVEMENT IN INDIA

- Reproductive, maternal, new-born and child health.
- Service capacity & Access
- Infectious Disease



CONCLUSION

SDG-3, 'Good Health and Well-Being,' is a vital global goal that aims to ensure everyone can enjoy a healthy life and well-being. It addresses various health challenges, promotes access to quality healthcare, and strives to reduce preventable deaths and diseases. Achieving SDG-3 not only improves the quality of life for individuals but also contributes to overall global prosperity and sustainable development.



TEAM – IV

Ananya Nair, Gokshetra Akkinapalli, Rohitha Kandagatla
School - Jain Heritage a Cambridge School, Kondapur, India

Topic: Life Below Water

Abstract:

India's fidelity to Sustainable Development Goal 14 takes into account sustainable management and safeguarding of marine and coastal ecosystems, addressing ocean acidification. The country's various démarches align with the United Nations' campaigns, emphasizing the need for multifaceted policies to alleviate marine life. Coastal ecosystem pollution derives from industrial waste and agricultural runoff, among others. By 2050, plastic pollution could transcend fish in oceans, impacting 600 marine species, and exacerbating the annual deaths of seabirds and mammals. Overfishing brings about 90% overexploitation of fish. There is nearly 50% coral depletion. What are we doing to combat this? Solutions include diminishing plastic use, fishing regulation, and habitat protection.

Global conservation undertakings like marine sanctuaries, sustainable fishing, habitat restoration, education, and eco-tourism have ameliorated marine life. SDG 14 accentuates the significance of oceans to uphold future generations' prosperity. Let us work together to ensure that these indispensable assets are protected for future generations.

Keywords: Alleviate; Undertakings; Ameliorated; Transcend; Exacerbating; Overexploitation.

RESEARCH ARTICLE

INTRODUCTION:

70% of the earth is made up of healthy oceans and seas, which are essential for providing food, energy, and water as well as for global cycling and climate management. Marine Protected Areas reduce poverty by boosting women's empowerment, income, employment creation, and fish harvest. Coastal communities are negatively impacted by pollution, overfishing, climate change, and environmental deterioration, which puts them at risk.

Through our research, we have understood and presented the UN targets for pursuing a future free of pollution in marine and coastal ecosystems, as well as addressing the effects of ocean acidification. Improving conservation and sustainable use of ocean-based resources through international legislation can also aid in mitigating some of the difficulties confronting our seas.

REVIEW OF THE ISSUE:

The United Nations adopted the Sustainable Development Goals (SDGs), also known as the Global Goals, in 2015 as a universal call to action to eradicate poverty, safeguard the environment, and make sure that by 2030, everyone has access to peace and prosperity. The fourteenth of the preceding 17 goals: Life below water, with its main focal point being "Conserve and sustainably use the oceans, seas, and marine resources for sustainable development".

Ocean Emergencies:

❖ Coastal eutrophication

Coastal eutrophication is the excessive nutrient enrichment of coastal waters, causing ecosystem imbalance, dead zones, and harmful algal blooms.

❖ Ocean acidification

Ocean acidification, caused by CO₂ absorption, harms marine ecosystems and biodiversity.

❖ Ocean Warming

Climate change warms oceans, posing threats to marine ecosystems, including coral bleaching, habitat loss, and altered species migrations.

❖ Plastic Pollution

Plastic pollution seriously threatens human health, ecosystems, and marine life by disrupting habitats, food chains, and harming animals.

Achieving SDG 14 presents several **challenges**, some of the key challenges include;

- Lack of awareness and understanding
- Limited enforcement and regulation
- Land-based pollution sources
- Plastic pollution
- Nutrient pollution and eutrophication
- Global cooperation and coordination
- Climate change impacts

NAVIGATING GOAL 14

The UN has created 10 targets and ten indicators for SDG 14. Objectives establish goals, while metrics reflect indicators that are used to judge whether or not these goals are met.

Society without these targets would gradually decrease the quality of marine and coastal ecosystems and there would be increased effects of ocean acidification.

The goal can be accomplished through national and individual efforts to put in place real national initiatives to protect and responsibly utilize the seas, oceans, and marine resources for sustainable development.

14.1 - SDG 14.1 aims to prevent and significantly reduce marine pollution, particularly from land-based activities.

The **indicators** include coastal eutrophication, assessing nutrient input into coastal waters, and plastic debris density, assessing the abundance and concentration of plastic debris in oceans.

Successful initiatives and projects worldwide have contributed to achieving SDG 14.1 include:

- UN Environment's Global Partnership on Marine Litter
- The Global Partnership for Marine Litter
- EU's Marine Strategy Framework Directive
- The Global Partnership on Nutrient Management
- The Blue Flag Program

14.2 -SDG 14.2 aims to sustainably manage and protect marine and coastal ecosystems, enhancing resilience and restoration for healthy oceans, with indicators including coastal countries utilizing ecosystem-based approaches.

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.2 include:

- The Blue Marine Foundation's Marine Protected Area (MPA) Program
- The Global Ghost Gear Initiative (GGGI)
- Seafood Watch Program
- The 30x30 initiative
- The SmartFish Program.

14.3 - SDG 14.3 aims to Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.

The **indicators** include the average marine acidity (pH) measured at the agreed suite of representative sampling stations

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.3 include:

- Global Ocean Acidification Observing Network (GOA-ON).
- Ocean Acidification International Coordination Centre (OA-ICC)
- International Alliance to Combat Ocean Acidification (OA Alliance)
- Blue Carbon Initiatives
- Regional and National Programs

14.4 - SDG 14.4 aims to regulate harvesting, end overfishing, illegal fishing, and destructive practices, and implement science-based management plans to restore fish stocks to sustainable yield levels, as determined by biological characteristics.

The indicators include the proportion of fish stocks within biologically sustainable levels.

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.4 include:

- NOAA's Sustainable Fisheries Management
- Common Fisheries Policy (CFP) of the European Union
- The Western and Central Pacific Fisheries Commission (WCPFC)
- Global Fishing Watch
- Fishing Marine Protected Areas (MPAs)

14.5 - SDG 14.5 aims to conserve at least 10% of coastal and marine areas through effectively managed, protected, and well-connected marine and coastal ecosystems.

The **indicators** include coverage of protected areas concerning marine areas.

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.5 include:

- Great Barrier Reef Marine Park Authority (GBRMPA)
- Papahānaumokuākea Marine National Monument
- UNESCO's World Heritage Marine Programme
- The Blue Nature Alliance
- Global Ocean Legacy

14.6 - SDG 14.6 aims to prevent overcapacity and overfishing by prohibiting certain fisheries subsidies, eliminating illegal and unregulated ones, and providing effective special treatment for developing countries in World Trade Organization fisheries subsidy negotiations.

Among the indicators is the extent to which international agreements intended to stop illicit, unreported, and uncontrolled fishing are being implemented.

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.6 include:

- World Trade Organization (WTO) Fisheries Subsidies Negotiations:
- Stop Illegal, Unreported and Unregulated (IUU) Fishing
- European Union Common Fisheries Policy (CFP)
- PEW Charitable Trusts' Ending Harmful Fisheries Subsidies Program
- Global Ocean Alliance

14.7 - SDG 14.7 **aims** to increase the economic benefits of sustainable marine resource use to Small Island Developing States and least developed nations by 2030, especially through sustainable management of fisheries, aquaculture, and tourism.

The **indicators** include sustainable fishing as a percentage of GDP in small island developing countries, least developed countries, and all countries.

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.7 include:

- Blue Economy Initiatives
- Fisheries Management and Conservation Programs
- Marine Protected Areas (MPAs)
- Sustainable Tourism Development Initiatives
- International Aid and Development Projects

14.8 - SDG 14.8 **aims** to improve scientific understanding, research capabilities, and the transfer of marine technologies are the objectives to benefit developing nations' oceans and marine biodiversity.

The **indicators** include the Proportion of the total research budget allocated to research in the field of marine technology.

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.8 include:

- Marine Stewardship Council (MSC)
- National Legislation and Regulations
- Global Sustainable Seafood Initiative (GSSI)
- Regional Fisheries Management Organizations (RFMOs)
- Fisheries Improvement Projects (FIPs)

14.9 - SDG 14.9 **aims** to allow small-scale artisanal fishers access to maritime resources and markets.

The **indicators** include the extent to which a legal/regulatory/policy/institutional framework recognises and safeguards access rights for small-scale fishing.

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.9 include:

- Integrated Coastal Zone Management (ICZM) Programs
- Ocean Acidification Research Initiatives
- Marine Pollution Control Projects
- Coral Reef Conservation Programs
- Marine Biodiversity Preservation Efforts

14.10 - SDG 14.10 **aims** to encourage ocean conservation and sustainable resource use and put international law into practice as outlined in the United Nations Convention on the Law of the Sea.

Among the **indications** are Nations are ratifying and implementing international law specified in the United Nations Convention on the Law of the Sea in order to protect the seas and exploit resources responsibly.

Successful initiatives and projects worldwide that have contributed to achieving SDG 14.10 include:

- Marine Protected Areas (MPAs)
- The Convention on Biological Diversity (CBD)
- Coral Reef Conservation Programs
- Global Ocean Observing Systems
- Blue Economy Initiatives

CONCLUSION:

In summary, this research article provides a comprehensive view of the state of Sustainable Development Goal 14: Life Below Water. Our oceans and marine ecosystems are confronting numerous challenges, including overfishing, pollution, habitat destruction, and the impacts of climate change. However, there is also a glimmer of hope, with a multitude of global efforts aiming at resolving these problems.

The achievement of SDG 14 is not just about preserving marine biodiversity; it holds wide-ranging implications for society, the economy, and the environment. Healthy seas are critical to food security, livelihoods, and climate regulation on our planet. By 2050, plastic pollution could transcend fish in oceans, impacting 600 marine species, and exacerbating the annual deaths of seabirds and mammals. Overfishing brings about 90% overexploitation of fish. There is nearly 50% coral depletion. These statistics highlight the gravity of the situation, emphasizing the need for immediate action to protect and conserve our oceans and marine ecosystems. Therefore, it is paramount that we work collectively to implement policies and practices that foster the long-term sustainability of our oceans and the life they harbor.

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POWERPOINT PRESENTATION

GOAL 14 - LIFE BELOW WATER

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01 Introduction

02 Review Of The Issue

03 Ocean Emergencies

04 Navigating Goal 14

05 Conclusion



The United Nations established the Sustainable Development Goals (SDGs) in 2015 to eradicate poverty, protect the environment, and ensure peace and prosperity for all by 2030.

Goal 14 - *Conserve and sustainably use the oceans, seas and marine resources for sustainable development.*

Review of the Issue

70% of the Earth's oceans and seas are vital for food, energy, water, global cycling, and climate management.

However, pollution, overfishing, and environmental degradation threaten coastal communities. International legislation can improve conservation and sustainable ocean-based resource use.

Coastal eutrophication

Ocean Warming

Plastic pollution

OCEAN EMERGENCIES

Overfishing

Ocean acidification

Navigating Goal 14

Achieving SDG 14 presents several challenges

01 Lack of awareness and understanding

02 Plastic pollution

03 Limited enforcement and regulation

04 Climate change impacts

05 Global cooperation and coordination

06 Nutrient pollution and eutrophication

The Mighty 10 targets

TARGET 14-1 REDUCE MARINE POLLUTION	TARGET 14-2 PROTECT AND RESTORE ECOSYSTEMS	TARGET 14-3 REDUCE OCEAN ACIDIFICATION	TARGET 14-4 SUSTAINABLE FISHING	TARGET 14-5 CONSERVE COASTAL AND MARINE AREAS
TARGET 14-6 END SUBSIDIES CONTRIBUTING TO OVERFISHING	TARGET 14-7 INCREASE THE ECONOMIC BENEFITS FROM SUSTAINABLE USE OF MARINE RESOURCES	TARGET 14-A INCREASE SCIENTIFIC KNOWLEDGE, RESEARCH AND TECHNOLOGY FOR OCEAN HEALTH	TARGET 14-B SUPPORT SMALL SCALE FISHERS	TARGET 14-C IMPLEMENT AND ENFORCE INTERNATIONAL SEA LAW

TARGET 14.1

AIM :
prevent and significantly reduce marine pollution, particularly from land-based activities.

INITIATIVES:



Global Partnership on Marine Litter



EU's Marine Strategy Framework Directive



The Blue Flag Program



The Global Partnership on Nutrient Management

TARGET 14.2

AIM :
sustainably manage and protect marine and coastal ecosystems, enhancing resilience and restoration for healthy oceans.

INITIATIVES :



BLUE MARINE
FOUNDATION



MARINE PROTECTED AREAS
Marine protected area

Seafood
WATCH



TARGET 14.3

AIM:
to minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.

INITIATIVES:



IAEA



INTERNATIONAL ALLIANCE TO
COMBAT OCEAN ACIDIFICATION



Ocean Acidification
Research for Sustainability

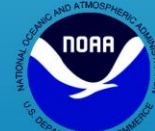
TARGET 14.4

AIM:
to regulate harvesting, end overfishing, illegal fishing, and destructive practices, and implement science-based management plans to restore fish stocks to sustainable yield levels, as determined by biological characteristics.

INITIATIVES :



Western and
Central Pacific
Fisheries
Commission



NOAA
FISHERIES



Global
Fishing
Watch

TARGET 14.5

AIM:

to conserve at least 10% of coastal and marine areas through effectively managed, protected, and well-connected marine and coastal ecosystems.

INITIATIVES:



Australian Government

Great Barrier Reef
Marine Park Authority



TARGET 14.6

AIM:

to prevent overcapacity and overfishing by prohibiting certain fisheries subsidies, eliminating illegal and unregulated ones, and providing effective special treatment for developing countries in World Trade Organization fisheries subsidy negotiations.

INITIATIVES:



Boat construction
& modernisation



TARGET 14.7

AIM:

to increase the economic benefits of sustainable marine resource use to Small Island Developing States and least developed nations by 2030, especially through sustainable management of fisheries, aquaculture, and tourism.

INITIATIVES:



TARGET 14.8

AIM:

to improve scientific understanding, research capabilities, and the transfer of marine technologies are the objectives to benefit developing nations' oceans and marine biodiversity.

INITIATIVES:



TARGET 14.9

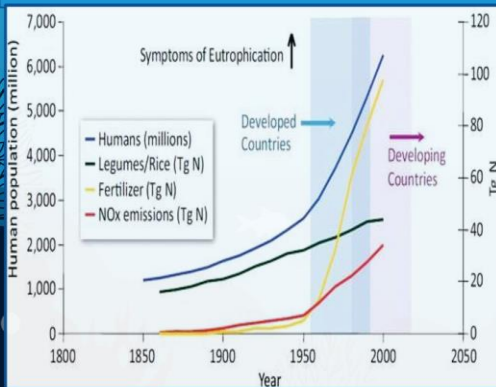
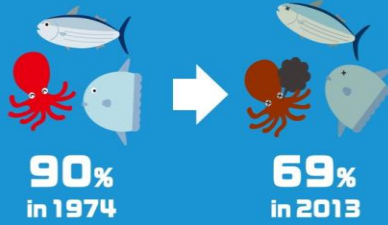
AIM:

to allow small-scale artisanal fishers access to maritime resources and markets.

INITIATIVES:



Biologically sustainable marine resources continue to decline, from 90% in 1974 to 69% in 2013.



14 LIFE BELOW WATER

SUSTAINABLE DEVELOPMENT GOALS

CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS, AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

IN INDIA

35% POPULATION LIVE ALONG COASTLINES

INDIA RANKED 12 AMONG THE TOP 20 COUNTRIES RESPONSIBLE FOR MARINE POLLUTION

INDIA GENERATES OVER 25,000 TONNES OF PLASTIC EVERYDAY

40% REMAINS UNCOLLECTED

SEA LEVEL RISES BY 1.33 MM/YEAR ON COASTS

GLOBALLY

COASTAL AND MARINE RESOURCES CONTRIBUTE US\$ 28 TRILLION TO THE GLOBAL ECONOMY EVERY YEAR

SECOND LARGEST PRODUCER OF FISH

CONCLUSION

Marine pollution is a pressing issue that demands immediate attention. By following the presentation's steps, we can reduce pollution and protect our planet for future generations, ensuring a cleaner and safer ocean for all living beings.

Recent Happenings

Ashok Gadgil



Increase awareness and understanding

Reduce plastic pollution and eutrophication

Proper enforcement and regulation

Global cooperation and coordination

TEAM - V

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School - Jain Heritage a Cambridge School, Nagpur, India
Topic: Decent Work and Economic Growth

Abstract:

Decent work and economic growth" is one of the 17 Sustainable Development Goals (SDGs) established by the United Nations as part of the 2030 Agenda for Sustainable Development. It is often referred to as SDG 8. This goal reflects the interconnectedness of labor, employment, and economic development in achieving a more sustainable and equitable world. SDG 8 aims to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. Here are some key components and targets of SDG 8:

Economic Growth: Encourage economic growth by achieving higher levels of productivity and through technological innovation, including fostering innovation and promoting entrepreneurship.

Decent Work: Promote full and productive employment for all, including women and young people, and ensure that jobs are safe and provide fair wages, social protection, and opportunities for personal and professional development.

Labour Rights: Protect labour rights and promote safe and secure working environments for all workers.

Youth Employment: Encourage policies that support young people in finding decent jobs and career development opportunities.

Tackle the challenges of the informal economy, such as providing legal recognition, social protection, and access to financial services for informal workers.

Sustainable Tourism: Promote sustainable tourism, which can create jobs and drive economic growth while minimizing its negative environmental and cultural impacts.

Financial Inclusion: Ensure access to financial services for all, which can help individuals and small businesses access credit, savings, and insurance, thereby contributing to economic growth.

Trade Policies: Develop and implement trade policies that support sustainable economic growth and job creation.

Support for Developing Countries: Assist developing countries in achieving higher levels of economic productivity and technological upgrading.

Resource Efficiency: Encourage efficient resource use in consumption and production, promoting sustainable practices.

The idea behind SDG 8 is to create a global economy that benefits everyone, where economic growth is sustainable and inclusive, and where people can find meaningful, secure employment with fair wages and good working conditions. Achieving this goal is vital for reducing poverty, inequality, and social unrest and for fostering a more sustainable and equitable world for future generations.

Key Words: Labor Right, Youth Employment, Informal Economy, Financial Inclusion

Research Article

Introduction:

Sustainable development is a global imperative that strives to balance economic growth, social progress, and environmental protection.

Sustainable Development Goals established by United Nations General Assembly in 2015. The official mission of SDG 8 is to “promote inclusive and sustainable economic growth, employment and decent work for all.

Decent work is not just a fundamental human right; it is also intricately linked to economic growth. This article explores the relationship between decent work and economic growth in the context of sustainable development.

Sustainable Development Goal 8 is divided into 12 targets and 17 indicators in the global world.

The Twelfth “Outcome targets” are

Sustainable economic growth

Diversity, innovate and upgrade for economic productivity

Promote policies to support job creation and growing enterprises

Improve resource efficiency in consumption and production

Full employment and decent work with equal pay

Promote youth employment, education and training

End modern slavery, trafficking, and child labour

Protect labour rights and promote safe working environments

Promote beneficial and sustainable tourism

Universal access to banking, insurance and financial services

Review of the Issue:

SDG 8 builds on the recognition that the existing economic system is not sustainable, and that modifications or alternatives have to be explored. At the same time, SDG 8 contains an implicit presumption that it is possible to decouple economic growth from environmental degradation and growing inequalities. Despite actions being taken, this has not yet been accomplished. Critics have questioned the inclusion of economic growth in the 2030 Agenda and the presumption of decoupling as possible, arguing that more fundamental changes are necessary.

This engagement with SDG 8 started in 2019 and has in many respects been successful.

There are, however, also challenges and obstacles that merit reflections, e.g., related to:

(i) Administrative structures, such as how to initiate, finance, and implement a broad collaborative and interdisciplinary initiative in a traditional academic organizational structure;

(ii) identifying and channeling interest and capabilities among staff when it comes to interdisciplinary and transdisciplinary cooperation, particularly given that collaboration and utilization are weakly promoted in the prevailing merit system;

(iii) International North-South collaboration, which requires relevance and mutual interest, as well as creativity, persistence, and financial resources to overcome physical hurdles;

(iv) Contextual differences between regions and countries, that affect the interlink ages between different goals and their targets.

“Means of achieving” targets include:

- Diversification
- Technological upgrading
- Innovation (including through a focus on high- value-added
- Labor intensive sectors

SDG 8 represents: promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Goal 8 aims to promote inclusive and sustainable economic growth, full and productive employment and decent work for all.

Despite its ambiguous targets and goals, is still an important tool for addressing urban challenges and calls for actors to develop realistic locally defined indicators and outputs to fit the urban context of specific cities to promote more sustainable , inclusive and equal cities.

AIM: To promote inclusive and sustainable economic growth, full and productive employment and decent work for all.

Factors that lead to a country's economic growth are

- land
- labor
- capital
- private enterprise

Methods:

Providing youth the best opportunity to transition to a decent job calls for investing in education and training of the highest possible quality, providing youth with skills that match labour market demands, giving them access to social protection and basic services regardless of their contract type, as well as leveling the playing field so that all aspiring youth can attain productive employment regardless of their gender, income level or socio-economic background.

- Promoting policies that encourage entrepreneurship
- Job creation
- Effective measures to eradicate forced labour
- Slavery and human trafficking

Achieving the synergy between decent work and economic growth for sustainable development is not without its challenges:

Informal Employment: Many workers remain in informal employment, lacking job security and social protections. Governments and organizations must promote formalization and decent work in these sectors. **Gender Disparities:** Gender disparities persist in the labor market. Efforts to ensure gender equality in employment and wages are crucial for sustainable development.

Globalization: Economic globalization can sometimes lead to exploitation of workers in developing countries. Global supply chains should be monitored and regulated to ensure decent work standards are met.

Results:

The Web research resulted in a clear understanding of the importance decent work and economic growth and the United Nation's efforts toward achieving the same the disparities and obstacles were clearly listed. A clear understanding of these issues resulted in exploring solutions to overcome the same.

Conclusion:

Decent Work and Economic Growth is not just the idea of developing the nation with the use of technology but to minimize the effect caused on the nation.

Decent work and economic growth are not opposing forces; they are essential pillars of sustainable development. Balancing economic expansion with social progress is the key to ensuring that the benefits of growth are felt by all members of society. Governments, businesses, and individuals must work together to promote decent work, protect workers' rights, and support sustainable economic growth on a global scale.

However, the focus of the world organization has shifted to preventive care in a big way since the last few decades. Base on the principle, United Nation's has framed SDG for Achievement of Sustainable Development Goal 8, which aims at promoting Sustainable cities and communities for all people.

Plagiarism:

The question is that how we are going to create economic growth in the emerging market where 90% of world's population lives and where on average 70% of population is under 25 age in this country is it is essential that they grow at minimum of 7% a year in order to put a Dent in poverty and to double Per capita incomes in one generation and yet today the largest emerging economic countries with at least 50 million people continue to struggle to reach at 7% magic mark worst than that country is like India Russia South Africa Brazil and event China or falling below 7% number and in many cases actually recreate regressing economic growth matters with economic growth countries and societies enter into a Vicious cycle of poverty upward mobility opportunity and improved living standards without growth countries contract and atrophy not just in the annuals of economic statistic but also in the meaning of life and how likes are lived.

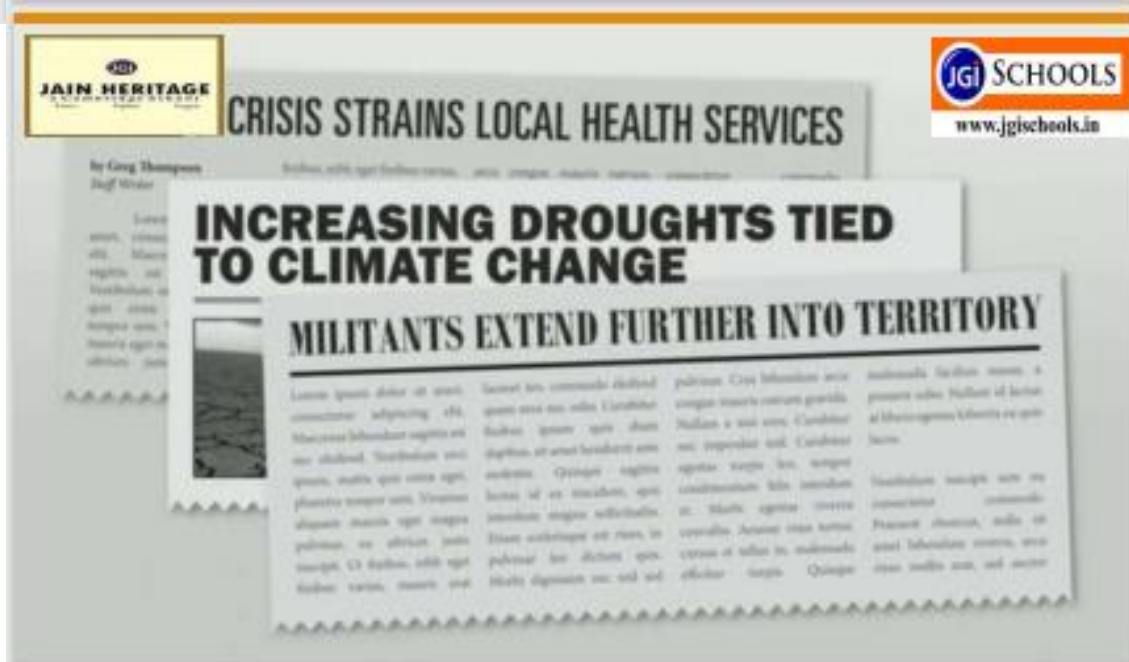
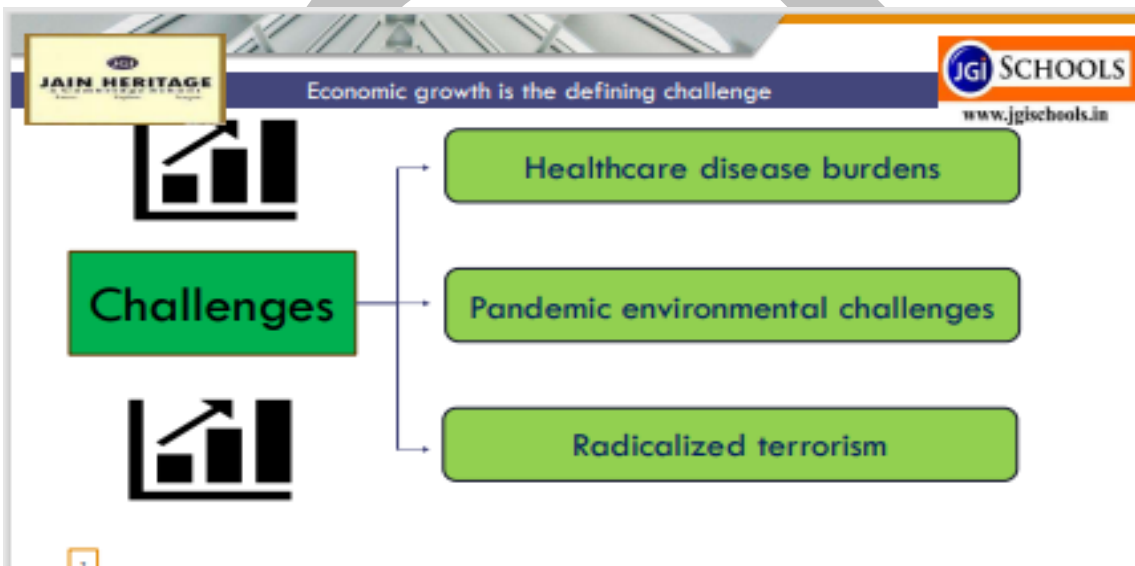
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POWERPOINT PRESENTATION



How we are going to create economic growth?



Economic growth



Capital labour



Productivity

WHY DOES ECONOMIC GROWTH MATTERS?

OPPORTUNITY

UPWARD MOBILITY

STANDARDS OF LIVING

8 DECENT WORK AND ECONOMIC GROWTH



This goal reflects the interconnectedness of labor, employment, and economic development in achieving a more sustainable and equitable world.

SDG 8
aims
to-

Promote sustained, inclusive, and sustainable economic growth

Full and productive employment

Decent work for all

KEY COMPONENTS AND TARGETS OF SDG 8

Economic growth



An increase in aggregate production in an economy, which is generally manifested in a rise in national income

Decent work



Productive work for women and men in conditions of freedom, equity, security and human dignity.

Labour rights



Protect labour rights and promote safe working environments



Youth employment



Substantially reduce the proportion of youth not in employment, education or training.

Sustainable tourism



Refers to sustainable practices in and by the tourism industry.

Financial inclusion



Individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance



Trade policies



A government policy that affects the number of goods and services a country exports and imports.

Support for developing countries



Helping or assisting other developing countries in achieving higher levels or goals.

Resource efficiency



Stands for the relationship between natural raw materials or technical-economic materials and the benefits gained from their use.



CONCLUSION

TEAM - VI

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School - Manaslu Public Secondary School, Kathmandu, Nepal

Topic: Sustainable Cities and Communities

Abstract:

The present research introduces sustainable development, its goals and its applications in our cities and communities to reduce negative impacts on our environment and to ensure that our future generations will have the resources required for further development. The research focuses on the 17 goals of sustainable development and ways to reach these goals in the city level and our communities. The research explores the various problems and challenges that may arise and prevent these goals from being reached. The paper also puts forward various possible solutions and measures that can be taken to accelerate the pace at which we reach these goals. The need for sustainable development and its necessity have been delineated in the paper. The paper aims to raise awareness of and promote sustainable development as a clean and environment friendly path to the future.

Keywords: Sustainable; Goals; Development

Research Article

Introduction: The World of Sustainable Development and its Application in Cities and Communities.

In our modern era of unparalleled urbanization and industrialization that has brought forth various environmental challenges, the necessity of sustainable development especially in cities and communities has never been higher. The goal of this research is to disentangle the complex web of variables and uncertainties blocking urban landscapes' pursuit of sustainable development. Cities, the center of development and human activities lie at the intersection of both opportunities and dangers. As the global population continue to converge into urban centers, cities and communities, they face the immense challenge of maintaining a balance between urban development and environmental preservation. The difficulties in this situation are numerous and include socioeconomic inequality, strained infrastructure, resource depletion and climate change. However within these difficulties lie even more opportunities for creativity, transformation and innovation to completely change our present state of development and head towards a more sustainable approach. Our happy and bright future will depend on our ability to comprehend and promote sustainable urban practices while working together with nature and environment. This article sets out on a trip through creative approaches, possible local projects and effective policy framework in an effort to shed light on some feasible avenues for comprehensive and long lasting urban development.

Review of the Issues: Addressing the Obstacles to Sustainable Development

As cities around the world continue experiencing unprecedented growth and expansion, the complex issues they face in attaining sustainable development are brought to light. The root of all these issues is the stress on essential resources and their scarcity. As the number of people living in cities increases, so does the demand for land, water and energy, prompting us to review and reassess our conventional resource management approaches. Urban growth and

sustainability need to be balanced which makes it of utmost priority to carefully consider resource allocation, use of renewable energy and establishment of green infrastructures.

At the same time, urban landscapes are also plagued by the long lasting shadow of climate change. Cities, as centers of development and human activities are becoming more and more susceptible to the effects of climate change. With the impending threat of sea level rise, temperature rise and extreme weather change, urban planning will have to go a substantial change to tackle these threats. The review explores the necessity of climate change resistance and how cities can withstand the impacts of these challenges. The exploration includes resilient urban planning, environment friendly infrastructures, and other innovative solutions to turn our cities into fortresses that can withstand all the challenges brought forth by climate change.

Infrastructure resilience becomes another major problem in urban cities. Innovative and effective solutions are in dire need to address the dual challenge of modifying infrastructures to withstand natural disasters and growing infrastructures to accommodate expanding population. The pre-established infrastructures that didn't include sustainability in their designs are major obstacles for full sustainable development of cities and urban areas. They have to either be dismantled or modified which both require massive investment and time. While the expanding population commands for more infrastructures to be built, these infrastructures must be planned properly and sustainably, else these very infrastructure will become a burden in the future.

Another issue that hinders sustainability in urban development and is the trickiest to deal with is the social inequality of the citizens. Some of the 17 goals of sustainable development are to promote equality to all people of the world and to eradicate poverty and unemployment. Cities present economic opportunities, but they also conceal pervasive social injustices that need to be addressed. People of different social standings enjoy different treatment and access to healthcare, employment and education, creating disparity in certain areas of the urban landscapes. Sustainable development are capable of serving as a catalyst for inclusivity, while also examining the complex problem of achieving social equality within cities. If not addressed quickly, the socioeconomic divide and discrimination can lead the underprivileged into unsustainable behaviors that can exacerbate environmental damage and unsustainability.

Another main objective and challenge of sustainability in cities and communities is reducing carbon footprint and impacts on the environment. This entails reevaluating industrial processes, proper waste management and transportation systems as well as the possible problems that arise when they are not done in time. The various industries and transport vehicles have become integral parts of the urban landscape and solving this dependence is not as simple as stopping all these industries and vehicles from operating as that would only lead to stopping the everyday life of the city and result in decline of the city.

In this extensive review, we investigate and explore the numerous problems and challenges to be faced in promoting sustainable development in cities and communities. We hope to

contribute to a complete and complex vision of sustainable development of urban areas by understanding the intricate interrelation between environmental, social and economic factors.

Methods: Formulating Solutions for Sustainable Urban Future

Any effort to decipher the complexities and nuances of sustainable urban development necessitates the creation of methodological framework that skillfully combines a variety of techniques. Our research takes a multidisciplinary approach, combining qualitative and quantitative techniques from different fields to gain a comprehensive understanding of the dynamic urban landscapes.

The first method is thorough literature review that explores scholarly works, official documents and real world case studies. This basic but fundamental stage identifies varying patterns, obstacles and effective tactics in the field of sustainable urban development in addition to instilling knowledge from previous research. Additionally, analyzing the research based case study provides us with examples from sustainable city models, enhancing our comprehension with concrete examples. With all the knowledge and information gathered from this method, we can think of and apply clever solutions to further urban sustainable development.

Addressing the problem of difference between intentions of policies and its impact on community, the paper proposes a participatory approach with stakeholders and their opinions. Through stakeholders and their interactions with planners, residents, officials and environmental expert, cooperation for sustainable urban development can be promoted. This approach ensures that a diverse range of perspectives and ideas are offered in shaping urban landscapes, thereby improving the feasibility and effectiveness of proposed interventions.

Finally, with regard to the complex string of variables that affect urban development plans and the human inability to deal with all these variables simultaneously, the paper puts forward the use of AI, IoT and other electronic mediums for integrated data analytics and GIS(Geographic Information System) mapping. Using integrated data analytics and GIS mapping, quantitative and qualitative analysis becomes a key component of our methodology. Experts can analyze the extensive datasets from integrated data analysis to search for patterns, factors and dynamics that can help us gain valuable insights on resource optimization, social disparities, climate change resistant planning and green as well as resilient infrastructure. The experts can also be visually aware of the impacts of interventions and obtain knowledge for their planning through GIS mapping.

Through these multidisciplinary approaches, our research seeks to actively craft solutions to eradicate the problems found in urban landscapes. We aim to contribute to the realization of a sustainable urban future that tackles resource strain, climate change, social disparities, and infrastructure resilience in a comprehensive and practical way by combining various methodologies.

Results: Challenges and Solutions and their Feasibility in Urban Sustainability

Our thorough research on urban sustainability has unveiled various results that illuminate the challenges, solutions and planning in it. After navigating through the complex issues and methodologies to tackle these issues, our research has found that the proposed solutions and methods if implemented properly with help from the government and the people, can alleviate the reviewed issues and even make the sustainable urban future a reality within this century.

Our research on resource strain has revealed promising initiatives and methods to optimize resource use. Only an independent and self-sustaining economy can eradicate the problem of resource strain. While resource strain will keep increasing with the population, optimized use of resources and a self-sustaining economy can help alleviate the problem and ensure that the resources last for a long time. This will also help to tackle the problem of social inequality and poverty that hinder urban sustainability.

Our finding also proposes various methods and processes to make the urban infrastructures sustainable and environment friendly. It is of paramount importance that while we still have time, we convert to sustainable and green infrastructure and even renovate our old infrastructures to be green and sustainable. Such infrastructures are capable of resisting the effects of climate change and require sustainable urban planning to match. Without proper planning, accounting for available area, resources, future development prospects and effects on citizen, infrastructures are just burdens of future. The research also delves in the role AI, IoT, IT, GIS or any digital medium can play in sustainable urban planning and promotes its use to make planning less complex. Similarly, multi stakeholder approach that increases interaction between stakeholders, experts, citizens and government is also proposed to eradicate the problem of difference in policy plans and their effects.

All things considered, the findings of our study offer a variety of perspectives and ideas on the revolutionary projects of sustainability taking place in cities and communities. In the quest for sustainable urban transformation our research aims to contribute by presenting knowledge on optimal resource utilization, social equity, climate resilience plans and technological usage to make sustainable development possible.

Conclusion: Charting Sustainable Urban Horizons

Our research has uncovered a large range of challenges faced by cities as we navigate the complex urban landscape. The challenges range from social disparities and infrastructure resilience to resource strain and climate vulnerabilities. Nevertheless, these problems also bring with them various opportunities and revolutionary solutions. Cities have the option to strengthen themselves against the effects of climate change with resilient urban design, maximizing optimal resource usage and promoting social justice through community driven projects and policies. Infrastructure paradigms are changing as a result of technological advancements, and more resistant and sustainable ecosystems are being produced by emphasizing green areas and inclusive economic models. The people can easily learn all they

desire about these projects through literature review and the knowledge available can only improve as more and more information is being discovered and circulated allowing for more innovation, creating a cycle of constant development. The difficulties we have investigated and rigorously thought of solutions to, when dealt with properly turn into doors rather than obstacles of sustainable urban future. The appeal for cities to keep coming up with new ideas, working together and putting sustainability at center of urban development is even more prominent. The present study only adds to the growing body of knowledge regarding sustainable cities by offering insights that will help us get closer to a future where urban areas serve as vibrant examples of sustainability, adaptability and diversity.

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POWERPOINT PRESENTATION



Introduction to Sustainable Development

- Cities are centers of development,
- Challenge to maintain a balance between urban development and environmental preservation



- Necessary to make cities sustainable

1. Problems and Challenges for Sustainable Development in Cities and Communities.

Resource Strain and Scarcity

- Unprecedented Population Growth,
- Increased Demand for Natural Resources.
- Resource depletion,
- Need to reevaluate conventional resource management.



Climate Change



- Industrialization and urbanization causes climate change,
- Threats of sea level rise, temperature rise, and extreme weather change.
- Necessity for climate change resistant development.

Infrastructure Resilience

- Growing population calls for more infrastructures.
- Challenge to make infrastructures resistant to accidents and accommodate population.
- Pre-established infrastructures requiring modification.



Social Inequality



- Pervasive social injustice present in cities,
- People of different social standing get different access to resources,
- Discrimination leads people into unsustainable behavior.



2

Solutions and Measures for Sustainable Development in Cities and Communities

8

Resource Optimization



- Resource optimization reduces resource strain,
- Resources are optimally used with no waste,
- More resources can be conserved for future generation.

9

Eco-Friendly and Planned Infrastructures

- Green infrastructures are resistant to climate change,
- Minimal if not zero effect on the environment,
- Accounting for available area, future development prospects and effects on citizens.



Use of Technology



- Use of AI for complex planning and accounting for all variables,
- Use of IT for easier communication and instruction in planning,
- Use of GIS for visual planning and observation.

Stakeholder Participation

- Ensured sufficient funding and resources,
- Stakeholder interaction promotes cooperation,
- Diverse range of perspectives, ideas and solutions.



Result of Our Research



Conclusion

- Population growth and climate change has made urban sustainability a necessity



14



- Cities face a large range of challenges in their quest for sustainability

15

- But various solutions also exist that help us negate these problems.

Resource Optimization

Green Infrastructures

Use of Technology

Stakeholder Participation

16

Thank you
For Your Attention

17



TEAM - VII

Riya Naphade, Arnav Netankar, Aishwarya Ingole

School - The Jain International School, Aurangabad, India

Topic: Quality Education

ABSTRACT:

“Education is the kindling of a flame, not the filling of a vessel.” –Socrates

Education is fundamental for self-respect. It unlocks the imagination and opens a world full of opportunities. SDG 4 ‘Quality Education’ aspires to reduce educational gaps and inequities, both in regards to access and quality. One of the most pressing issues is the quality of education in rural areas. In addition, there is a considerable gender disparity in education, with girls enrolling at a lower rate than boys. As the COVID-19 pandemic expanded over the world in 2020, millions of kids were unable to attend school owing to closures and a lack of accessibility to digital learning tools. To achieve SDG 4 in India, it is crucial to raise awareness about these challenges and enact policies that promote universal access to high-quality education. The Indian government has launched multiple initiatives such as the Sarva Shiksha Abhiyan and the Rashtriya Madhyamik Shiksha Abhiyan to boost enrolment and literacy rates, particularly in rural areas. To attain this goal, governments, organizations and societies must work together. This goal is significant because of the transformative effects it has on the other SDGs and promotes socioeconomic mobility.

Keywords: opportunities; inequities; socioeconomic mobility.

RESEARCH ARTICLE

INTRODUCTION:

Education is regarded as a force for steady expansion, the development of nations, and tranquilly. Sustainable Development Goal 4 “QUALITY EDUCATION” covers the critical role of education in promoting long-term holistic development. Since 1990, "Education for All" has been an internationally recognized phrase and has drawn attention through many worldwide development courses. The key objective of Sustainable Development Goal 4 is to render an equitable and excellent schooling that will enhance both the learner's standard of living as well as the longevity of society as a whole.

REVIEW OF THE ISSUE:

Speaking about India, it has made a lot of progress over the years. Though, the country is confronted with some factors to look at;

1. Infrastructure: Inadequate infrastructure, such as the lack of basic amenities like classrooms and safe drinking water is a key issue.
2. Adult Illiteracy: Adult illiteracy is a serious issue because the uninformed adult population is oblivious to the value of education, they are skeptical that it is vital to educate the younger generation.
3. Teacher Training: Particularly in remote areas, certain educators lack the necessary training and cannot provide high quality education.
4. Curriculum Issues: India's educational system is frequently criticized for being obsolete and not emphasizing practical skills. It could be tricky for teachers to get students interested in material that has not much impact on their daily lives.

5. Low Salaries: The mediocre pay and limited perks that many teachers in India receive can demotivate them and prevent them from advancing their careers.
6. Lack of Funding: In education insufficient fund hinders quality and access, limiting opportunities for students and affecting the overall education system.

METHODS:

The Indian government has taken the following initiatives for the following issues:

Infrastructure: The establishment of Model Schools with cutting-edge facilities and infrastructure as illustrations of top-notch educational institutions has been started by the government.

Digital Classroom: To improve the learning experience, a number of governments and regions are implementing smart classroom equipped with audio-visual teachings aids and digital data.

Public-Private Partnership: The government has occasionally fostered involvement of the private sector in the preparation and management of educational facilities.

International Cooperation: Global collaboration is essential for achieving SDG 4. International organizations, governments, and NGOs must work together to address global disparities and improve education quality.

Sarva Shiksha Abhiyan (SSA): SSA is a flagship initiative that emphasizes on enhancing elementary school facilities. It attempts to give schools access to necessary amenities like classrooms, restrooms, drinking water, and libraries.

Swachh Vidyalaya Abhiyan: The initiative aims to create separate restrooms for boys and girls in schools to improve sanitation conditions and encourage the attendance and retention of female pupils.

RESULTS:

This section explores the outcomes of several approaches and tactics used to raise educational standards. A diversified strategy for raising educational standards in India has shown encouraging outcomes. These are some interesting figures and results:

Increase in Literacy Rates: Over the years, India's literacy rate has risen consistently from 64.83% in 2001 to 74.04% in 2011. This shows a tremendous improvement in the access to basic education. The percentage of kids who are not in school has considerably decreased in recent years.

Education Gender Parity: The gender gap in the classroom has also shrunk as a result of programs designed to increase the enrollment of girls and create a safer, more welcoming learning environment.

Enhancement of the Curriculum: India has been updating its curriculum over time to make it more current and compatible with the demands of the twenty-first century like digital literacy and job-related skills.

Access to Educational Resources Has Increased: Students now have easier access to high-quality educational resources thanks to the growth of digital resources, free educational content, and e-learning platforms.

These methods discussed have yielded promising results in many regions. For example:

In The United States, a teacher training program led to a 15% improvement in student performance and access to up-to-date textbooks and educational technology in India resulted in a 20% increase in student engagement and learning outcomes.

However, it's essential to acknowledge that challenges persist, particularly in areas with limited resources and political instability. Progress toward SDG 4 is non-linear and contingent on a multitude of factors.

CONCLUSION:

In conclusion, Sustainable Development Goal 4, the commitment to quality education for all, is a critical pillar of the global development agenda. The achievement of SDG 4 is intertwined with the broader sustainable development agenda. It contributes to reducing poverty, promoting gender equality, and fostering peace and justice. Achieving it requires a multifaceted approach, including improving teacher quality, reforming the curriculum, ensuring equitable access to learning materials, and addressing disparities and inequalities in education. The progress is evident in many regions but is also met with persistent challenges. Nonetheless, the significance of quality education in fostering sustainable development cannot be overstated. It is our shared responsibility to invest in education and ensure that no one is left behind.

CASE STUDY:

1. India's Progress in Achieving SDG 4

Introduction:

India, with its diverse population and complex educational landscape, has made significant strides towards achieving inclusive and equitable quality education for all. India's education system is characterized by significant disparities across states, with varying levels of development and infrastructure. This case study explores India's progress in this regard.

Challenges:

1. **Inequality:** Disparities in educational access and quality persist, particularly in rural and marginalized communities.
2. **Quality Discrepancies:** The quality of education varies significantly between states and regions. While some states have made remarkable progress, others lag behind.
3. **Teacher Shortages:** A shortage of qualified teachers in remote areas affects the student-teacher ratio and impacts the quality of education.
4. **Access to Higher Education:** Access to quality higher education remains a challenge for many, leading to increased competition and limited opportunities for students.

Implementation Strategies:

1. **Equity Initiatives:** Develop targeted initiatives to reach underserved and marginalized populations, including scholarships, mentoring programs, and infrastructure development.
2. **Teacher Training Programs:** Expand teacher training and development programs to improve teacher quality and motivate educators to work in remote areas.

3. **Standardization Efforts:** Collaborate with states to establish standardized quality assurance mechanisms, curriculum frameworks, and evaluation processes.
4. **Digital Literacy Programs:** Extend digital literacy programs, ensuring that all students have access to digital resources and online learning opportunities.

Key Achievements:

1. **India has made notable progress in achieving universal primary education through government initiatives, such as the Sarva Shiksha Abhiyan and enhanced the quality of education and infrastructure in schools through. Madhyamik Shiksha Abhiyan (RMSA) and the Samagra Shiksha Abhiyan.**
2. **Skill Development:** Initiatives like the Skill India program aim to provide vocational training and skill development opportunities, aligning with the goal of lifelong learning.
3. **Digital Education:** The Digital India campaign has promoted the use of technology in education, offering digital content and online courses for a broader reach.

Conclusion:

India's progress in achieving SDG 4 reflects significant steps taken to provide inclusive and equitable quality education for its vast and diverse population. However, challenges related to inequality, quality discrepancies, teacher shortages, and access to higher education persist. By implementing equity-centered policies, investing in teacher development, standardizing education, and promoting digital inclusion, India can continue its journey toward achieving SDG 4 and offering quality education to all its citizens, regardless of their background or location.

2. Finland's Success in Achieving SDG 4

Introduction:

Finland has one of the best educational systems due to its innovative teaching methods and flexible educational courses. Finland's educational system is often lauded as a global exemplar in achieving SDG 4, which aims to ensure inclusive and equitable quality education for all. According to the World Population Review, it comes in eighth among the top 10 industrialized nations in 2023. This case study delves into the key factors contributing to Finland's success and offers recommendations for other nations.

Challenges:

Despite being considered one of the world's leading education systems, Finland still faced minor disparities, in access to quality education particularly among certain marginalized groups.

Implementation Strategies:

Finland's approach to achieving SDG 4 and addressing these problems included:

1. **Comprehensive Educational Reform:** Continuous reform and adaptation of the curriculum to align with changing needs, focusing on problem-solving, critical thinking, and interdisciplinary learning.
2. **Equity-Oriented Policies:** Ensuring that education is free and accessible for all, regardless of socioeconomic status, and providing additional support for students who need it most.

Conclusion

Finland's remarkable success in achieving Sustainable Development Goal 4, which aims to ensure inclusive and equitable quality education, serves as a beacon of inspiration for the global community. Finland's case study demonstrates how a combination of equitable policies, teacher professionalism, curriculum innovation, and inclusion efforts can contribute to significant progress in achieving Sustainable Development Goal 4.

By adopting these strategies other nations can make significant progress toward achieving SDG 4 and providing inclusive and equitable quality education for their citizens.

Key Takeaways:

1. **Equity and Inclusion:** Finland's commitment to equal access to quality education for all students, irrespective of their background, demonstrates the importance of prioritizing equity within SDG 4.
2. **Teacher Quality:** High-quality teacher training and a strong focus on teacher professionalism are fundamental to achieving excellence in education.
3. **Curriculum Adaptation:** A flexible and adaptable curriculum that evolves to meet the needs of the 21st century is essential for preparing students for the future.

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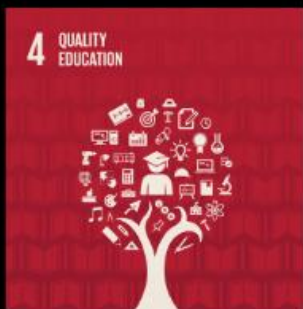
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POWERPOINT PRESENTATION

SUSTAINABLE DEVELOPMENT GOAL 4 - QUALITY EDUCATION

Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.



PRESENTED BY:
TEAM TJIS
CHATRAPATI SAMBHAJI
NAGAR (AURANGABAD)



1. RIYA NAPHADE
2. AISHWARYA INGOLE
3. ARNAV NETANKAR

GOALS TARGETS & INDICATORS

2030



Equitable access
Quality Education
Gender Quality
Global citizenship

GOALS



Free and equal access to
quality education
Universal literacy
Eliminate discrimination

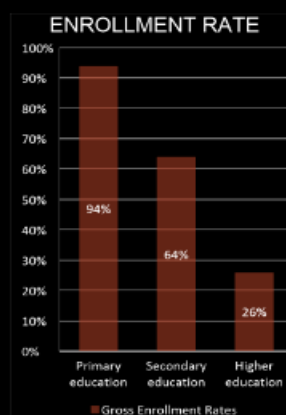
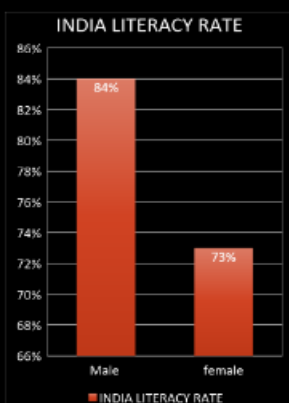
TARGETS



Literacy rates
Participation rates
Completion rates
Gender parity

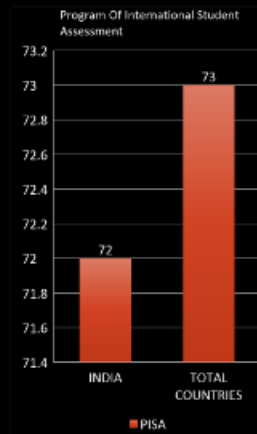
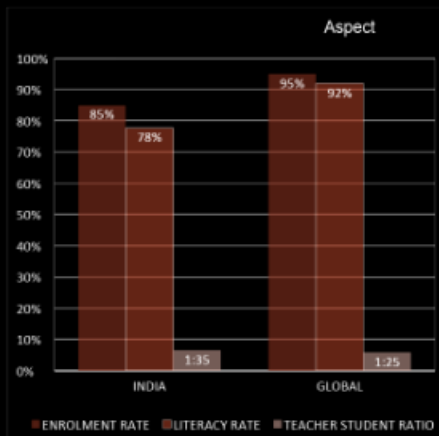
INDICATORS

INDIA STATISTICS



** As per Ministry of Education Department **

GLOBAL STATISTICS



What is the Problem?

Social And Economic Barriers



Gender Inequality



Lack Of Qualified Teachers



Lack Of Access To Education



Low Education Quality



Inadequate infrastructure

4 QUALITY EDUCATION



ACTION STRATEGIES & BENEFITS

QUALITY EDUCATION

KEY STRATEGIES



- Increased investment in education
- Promotion of gender and social equality in education.
- Collaboration between governments, NGOs, and private sector to support education initiatives.
- Digital inclusion to address online access

BENEFITS



- Empowerment
- Poverty Reduction
- Health and Well-being
- Gender Equality

STEPS TOWARDS ACHIEVING SDG 4



GLOBAL EFFORTS AND INITIATIVES

- UNESCO's Education 2030 Framework for Action
- The GIGA Initiative by UNICEF-ITU



INDIAN GOVERNMENT INITIATIVES

- Sarva Shiksha Abhiyan (SSA)
- Rashtriya Madhyamik Shiksha Abhiyan (RMSA)



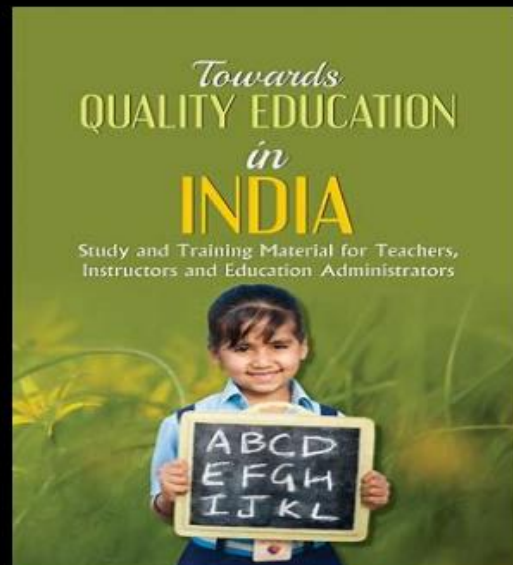
ROLE OF STAKEHOLDERS

- Civil Society
- Private Sector
- International Organizations
- Teachers and Education Professionals
- Parents and Students.
- Researchers and Academics



SUCCESS STORIES - INDIA

Despite teacher shortages, infrastructure gaps, and socio-economic disparities, India has made strides through initiatives like Sarva Shiksha Abhiyan and Digital India. India's ongoing work involves improving infrastructure, teacher quality, and access, emphasizing the need for inclusive, equitable quality education.



FINLAND'S EDUCATION SYSTEM: In a nutshell



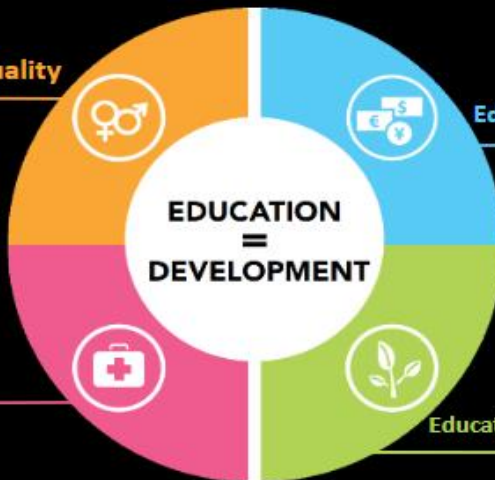
SUCCESS STORIES -FINLAND

Finland is often regarded as having one of the best education systems in the world.

CONCLUSION



Education = Gender Equality



Education = Economic Opportunity

Education = Health

Education = Environmental Sustainability



Let's work together to ensure that every child has access to quality education and opportunity to reach their full potential...

THANK YOU



RESULTS

Best Abstract - Prasanna Adhithya, Saksham Uboweja, Gouri Menon (Team II)



Best Research Article - Ananya Nair, Gokshetra A, Rohitha K (Team IV)

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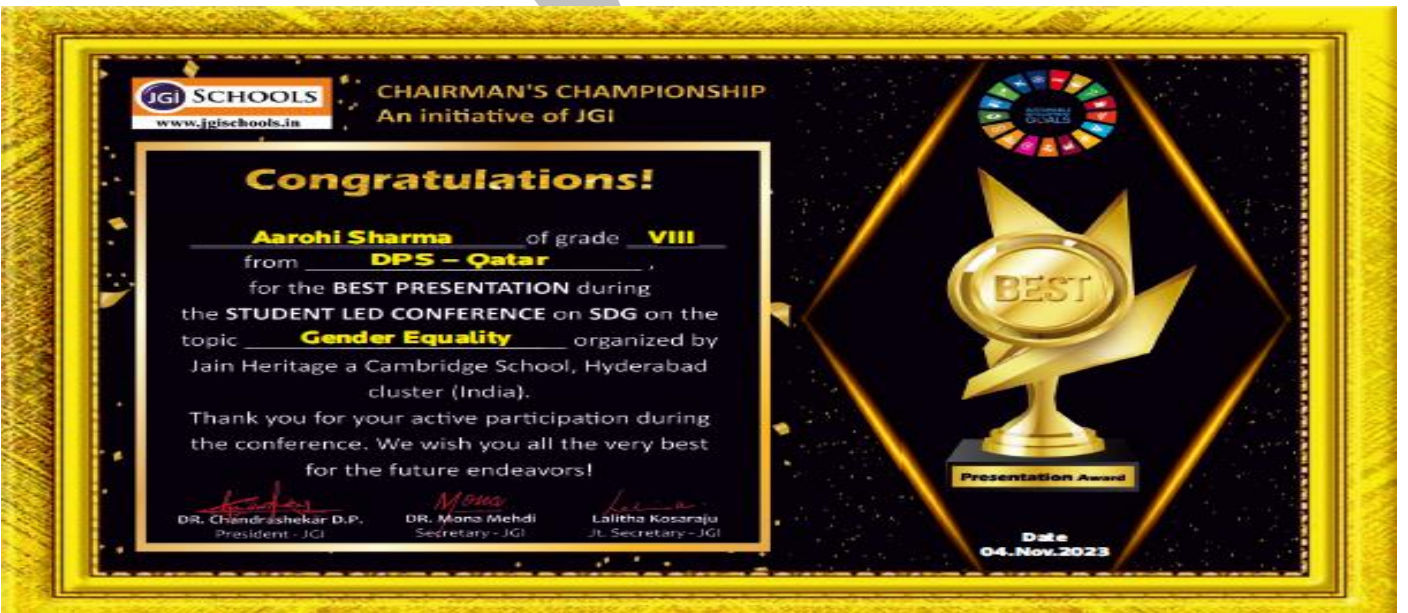
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Best Presentation – Saisha Varma, Aarohi Sharma, Syed Amir (Team I)



Best Presentation – Ananya Nair, Gokshetra A, Rohitha K (Team IV)



Best Presentation – Riya Naphade, Arnav Netankar, Aishwarya Ingole (Team VII)

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04.Nov.2023

Best Team - Saisha Varma, Aarohi Sharma, Syed Amir (Team I)



Runners up Team - Prasanna Adhithya, Saksham Uboweja, Gouri Menon (Team II)



Runners up Team - Ananya Nair, Gokshetra A, Rohitha K (Team IV)



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Date
04.Nov.2023



Best Speaker – Saksham Uboweja (Team II) Riya Naphade (Team-VII)

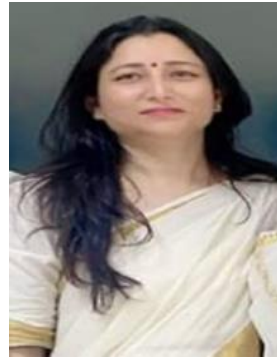




TESTIMONIALS



Lakshmi Bijoy



Nonika Sambyal

In charges

Overseas Exchange Programme

DPS Modern Indian School, Doha, Qatar

It was truly gratifying to be once again a part of the 9th Chairman's Championship International Students' Led Conference (3rd Edition) on Sustainable Development Goals.

Our students have thoroughly enjoyed participating in the conference and connecting with people from other countries. It was a great exposure and learning experience. The whole process of preparing the Abstract, Research Article and Oral presentation has helped students gain a better understanding of the SDGs. It has also brought in a lot of awareness and commitments in the students and made them realize their role in the race to accelerate SDG achievement. Undoubtedly, such initiatives contribute in making a big difference.

Many congratulations to JGI Management, Mona ma'am and the entire team for your relentless effort in monitoring, refining and implementing the event to be an impeccable one. On behalf of our Principal, Ms. Asna Nafees and the entire DPS Modern Indian School, Qatar family, we hope the best and success in your future.



Shuchita Malhotra

Coordinator

JHCS Kondapur

We were thrilled to see the performance of the children in the recently concluded Chairman Championship week which ended on 4-November'2023 with oral presentation . The teams were very well prepared and enthused to present their topic for discussion. The teams selected wide range of subjects and did a comprehensive research to prepare their presentations. Similar to last time we had a very good participation from 7 schools which joined the conference from different geographies like Hyderabad,Doha,Nepal,Qatar. The teams were evaluated by independent jury to maintain transparency in results. The teams challenged each other so well that it became really tough for the jury to declare the results. The trio of Team Kondapur comprising Ananya Nair, Rohitha K & Gokshetra made up proud by grabbing three prizes- Best research article, Best performance and runner up best team.

We aim to maintain the same momentum in the forthcoming years of Chairman Championship.



Archana Tiwari
JHCS Nagpur

My journey at JHCS Nagpur has been spectacular and overwhelming. The school has positive vibes that makes it a beautiful shelter for not only students but also for the teachers. Our students who participate in Chairman's Championship events was the biggest opportunity for them to present their Research work in front of 7 schools. It was very surprised to see the interest of students in making abstract, their research and power point presentation. It was a wonderful journey of 15 days where I learn so many new things from my students. Our paper presentation on Sustainable Development: Decent Work and Economic Growth objective is to learn about how it impact our careers. It adds value because it brings the real world to my students.



INTERNATIONAL STUDENT LED CONFERENCE (3 RD EDITION)

ON SUSTAINABLE DEVELOPMENT GOALS

AS PART OF

9TH CHAIRMAN'S CHAMPIONSHIP

(AN INITIATIVE OF JGI)

Date : 4th November 2023
Saturday

Time : 10:30am to 1:00pm



Presided By

Dr. Chandrashekar DP

CEO - JGI PRESIDENT - ACADEMIC COUNCIL

Dr. Mona Mehdi

SECRETARY - ACADEMIC COUNCIL

Mrs. Lalitha Kosaraju

JT - SECRETARY - ACADEMIC COUNCIL

Distinguished Guests (Jury)

Dr. Nilofer Hussaini
Bangalore

Dr. Uma Shankar. M
Bangalore

Dr. Tajwar Hussaini
Dubai

Programme Schedule

9TH CHAIRMAN'S CHAMPIONSHIP

1. Lighting of Lamp - 10:30 am
2. School Song - 10:33 am
3. Welcome Address by Secretary Academic Council – Dr Mona Mehdi - 10:33 am to 10:45 am
4. Oral Presentation by Team 1 – DPS Modern Indian School - Qatar - 10:45 am to 10:52 am
5. Oral Presentation by Team 4 – Jain Heritage A Cambridge School, Kondapur, India - 10:55 am to 11:02 am
6. Address by Jury Member – Dr. Tajwar Hussaini - Dubai - 11:05 am to 11:10 am
7. Oral Presentation by Team 2 – GEMS Modern Academy - Dubai - 11:15 am to 11:22 am
8. Oral Presentation by Team 3 – Jain Heritage A Cambridge School, Shamirpet, India - 11:25 am to 11:32 am
9. Address by Jury Member – Dr. Uma Shankar - Bangalore - 11:35 am to 11:40 am
10. Oral Presentation by Team 5 – Jain Heritage A Cambridge School – Nagpur, India - 11:43 am to 11:50 am
11. Oral Presentation by Team 6 – Manaslu Public Secondary School, Kathmandu, Nepal - 11:53 am to 12:00 am
12. Oral Presentation by Team 7 – The Jain International School, Aurangabad, India - 12:03 am to 12:10 pm
13. Address by Jury Member – Dr. Nilofer Hussaini - Bangalore - 12:13 pm to 12:18 pm
14. Address by President Academic Council – Dr Chandrashekar DP & Release of SMART DIAMONDS VoI IV - 12:20 pm to 12:35 pm
15. Result Declaration for the Student Led Conference - 12:35 pm to 12:55 pm
 - i) Best Abstract
 - ii) Best Research Article
 - iii) Best Presentation
 - iv) Best Team
 - v) Runners Up Team
 - vi) Best SpeakerSubject Expert for the Term I
16. Vote of Thanks by Ms. LalithaKosaraju - 12:55 pm to 1:00 pm
17. National Anthem - 1:00 pm

INTERNATIONAL
STUDENT LED CONFERENCE (3RD EDITION)
ON SUSTAINABLE DEVELOPMENT GOALS



OFFICE ADDRESS:

Jain Heritage a Cambridge School,
Survey No – 187, Botanical Garden Rd., Masjid Banda, Kondapur,
Hyderabad – 500 084, Telangana. Contact: 9393676701/ 040-44755252

Designed by:
Ms Shameem