Climate Action Manual.

A toolkit for school and community coordinators

CONTENTS

INTRODUCTION

"Earth provides enough to satisfy every man's need, but not every man's greed."

-Mahatma Gandhi

Subject

This section explains what climate change is, its impact on the environment, causes as well as ways in addressing the challenges of climate change.

Learning outcome

- To understand what is climate change.
- The participants should be able to identify the causes of climate change.
- The participants should be able to understand the effect of climate change on the environment.
- The participants should be able to address the impact and challenges of climate change.
- To build a sense of hope that solutions to the climate crisis are achievable.

WHAT IS CLIMATE CHANGE?

Climate change refers to long term shifts in temperatures and weather patterns. These shifts can be natural due to changes in the sun's activity or volcanic eruption. Climate change over the years has become our present day reality. It is an internationally recognised problem that is having impact all over the earth. Despite the changes that occur to the climate naturally, the human activities are contributing to climate change faster which brings about depletion in the ozone layer in an unnatural way than before. This human induced climate change is causing shifts in the natural climate conditions such as rise in temperature and rainfall which impacts negatively on the people and natural environment.

CAUSES OF CLIMATE CHANGE ON THE ENVIRONMENT

The emission of increasing amount of greenhouse gases into the earth's atmosphere by humans is a contributing factor to the cause of climate change globally. This is not to say that greenhouses don't occur naturally because it is what makes the temperature warm enough for life to exist otherwise it will be too cold and uninhabitable. The major causes include:

Burning of Fossil Fuels:

Combustion of coal, oil, and natural gas for energy production releases carbon dioxide (CO_2), a major greenhouse gas.

Deforestation:

Clearing large areas of forests reduces the number of trees available to absorb CO_2, contributing to higher atmospheric CO_2 levels.

Industrial Processes:

Certain industrial activities release potent greenhouse gases like methane (CH4) and nitrous oxide (N2O).

Agricultural Practices:

Agricultural activities, including livestock farming and rice cultivation, produce methane. The use of nitrogen-based fertilizers releases nitrous oxide.

Land Use Changes:

Converting natural landscapes into urban areas or agricultural fields alters the balance of greenhouse gases in the atmosphere.

Waste Management:

Landfills and waste treatment processes can generate methane emissions.

Transportation:

Burning fossil fuels in vehicles releases CO2 and other pollutants, contributing to climate change.

Use of Fluorinated Gases:

Certain human-made gases, like hydro fluorocarbons (HFCs), per fluorocarbons (PFCs) and sulphur hexafluoride (SF6) have a high global warming potential.

Increased Livestock Production:

Rearing livestock, particularly cattle, produces methane through enteric fermentation and manure decomposition.

These activities enhance the natural greenhouse effect, trapping more heat in the Earth's atmosphere and leading to global warming. It's important to address these human-induced causes to mitigate the impacts of climate change.

IMPACT OF CLIMATE CHANGE ON THE ENVIRONMENT

Climate change has far-reaching impacts on the environment, affecting ecosystems, biodiversity, weather patterns, and more. Here are some key impacts:

Rising Temperatures:

Global temperatures are increasing, leading to heat waves and altered weather patterns.

Melting Ice and Glaciers:

The warming climate causes the melting of ice caps and glaciers, contributing to rising sea levels.

Sea Level Rise:

Melting ice and the expansion of seawater as it warms lead to rising sea levels, threatening coastal areas. Rising sea levels and more intense storms pose risks to coastal infrastructure, including cities and transportation systems.

Extreme Weather Events:

Climate change increases frequency and intensity of extreme weather events like hurricanes, droughts, floods, and wildfires.

Ocean Acidification:

Absorption of excess carbon dioxide by oceans leads to increased acidity, impacting marine life such as coral reefs and shell-forming organisms.

Disruption of Ecosystems:

Changing temperatures and precipitation patterns affect ecosystems, potentially leading to the loss of biodiversity.

Shifts in Wildlife Habitats:

Some species may experience shifts in migration patterns and adaptation to new habitats as traditional ones become inhospitable due to changing environmental conditions.

Threats to Agriculture:

Changes in temperature and precipitation patterns can affect crop yields and disrupt agricultural practices.

Water Scarcity:

Changes in precipitation and increased evaporation contribute to water scarcity in some regions.

Increased Health Risks:

Climate change can exacerbate the spread of diseases, create heat-related health issues and impact air and water quality.

Loss of Glacial Water Sources:

Communities relying on glacial melt water for freshwater may face shortages as glaciers recede.

Social and Economic Disruptions:

Climate-related events can lead to displacement, loss of livelihoods, and increased vulnerability, particularly in vulnerable communities.

Addressing climate change is crucial to mitigate these impacts and work toward a more sustainable and resilient future.

Figure on climate change indicating direct effects

THE URGENCY OF ADDRESSING CLIMATE CHANGE FOR SUSTAINABLE DEVELOPMENT

Addressing climate change is crucial for several compelling reasons:

Environmental Stability:

Climate change poses a significant threat to the stability of ecosystems, biodiversity, and natural resources. By mitigating climate change, we aim to preserve the health and balance of our planet.

Human Health and Well-being:

Climate change contributes to extreme weather events, shifts in disease patterns, and impacts on air and water quality, affecting human health and well-being.

Social and Economic Stability:

Climate-related disruptions can lead to economic losses, displacement of communities, and social unrest. Addressing climate change helps maintain stability and resilience in societies.

Global Cooperation:

Climate change is a global issue that requires international collaboration. Addressing it fosters cooperation and solidarity among nations and local communities to achieve shared environmental goals.

Preserving Biodiversity:

Climate change threatens the existence of numerous plant and animal species. Mitigating climate change is essential to preserving biodiversity and maintaining ecosystems.

Resource Sustainability:

Sustainable use of resources, including energy, water, and land, is vital for a resilient and thriving future. Addressing climate change is integral to achieving sustainable resource management.

Mitigating Extreme Weather Events:

Climate change contributes to more frequent and severe extreme weather events such as hurricanes, droughts, and wildfires. Taking action helps reduce the risks associated with these events.

Protecting Vulnerable Communities:

Vulnerable communities, often the least equipped to deal with climate impacts, require protection. Addressing climate change is an ethical responsibility to safeguard these populations.

Global Food Security:

Changes in climate patterns can impact agricultural productivity, threatening global food security. Addressing climate change is crucial to ensuring a stable and sustainable food supply.

Long-term Economic Viability:

Sustainable economic development relies on a stable climate. Adapting and mitigating climate change ensures the long-term viability of economic systems.

Preserving Cultural Heritage:

Climate change poses risks to cultural heritage sites and indigenous practices. Addressing it helps protect and preserve cultural diversity and heritage.

Ethical Responsibility:

Addressing climate change is an ethical responsibility to future generations. Taking action now ensures a habitable planet for generations to come.

In summary, addressing climate change is essential for the well-being of the planet, its inhabitants, and the sustainability of human activities. It requires collective and immediate action to mitigate its impacts and build a more resilient and sustainable future.

Activity plan

- Participants should express their understanding of climate change through creative projects like art works, poems or posters.
- Each learner should write their personal goals on how they intend to reduce their carbon foot print
- Invite guest speakers to share their expertise and inspire students to get involved in climate change.
- Organise community service projects focused on environmental conservation and sustainability such as tree planting

GENDER AND SOCIAL INCLUSION

"A gender-equal society would be one where the word "gender" does not exist: where everyone can be themselves."

-Gloria Steinem

Subject

This section reflects the overarching topic of this module which covers various aspects related to gender equality and social inclusion.

Learning outcome

- To understand the concept of gender equality and social inclusion.
- To identify different forms of discrimination, bias and barriers faced by marginalised groups in society.
- Importance of GESI in climate action
- Evaluate the impact of gender stereotypes, cultural norms and institutionalize discrimination on individuals and communities.

DEFINITION OF GESI TERMS

Gender: The male sex or the female sex, especially when considered with reference to social and cultural differences rather than biological ones, or one of a range of other identities that do not correspond to established ideas of male and female.

Diversity: Diversity refers to the presence of a wide range of human differences within a group, organization, or society. These differences can include but are not limited to race, ethnicity, gender, sexual orientation, age, socioeconomic status, religion, disability, nationality, and cultural background. Embracing diversity involves recognizing, respecting, and valuing the unique perspectives, experiences, and identities of individuals and creating inclusive environments where everyone feels welcomed, respected, and empowered to contribute. Diversity enriches communities and workplaces by fostering innovation, creativity, and understanding, and it is essential for promoting equality, social justice, and human rights.

Inclusion: Inclusion refers to the practice of ensuring that all individuals, regardless of their differences or identities, feel valued, respected, and empowered to fully participate and contribute within a group, organization, or society. Inclusive environments promote diversity by embracing and celebrating the unique perspectives, backgrounds, and experiences of every individual. Inclusion involves creating a sense of belonging where everyone feels welcome and supported, and where barriers to participation and opportunities are identified and addressed. It goes beyond mere tolerance to actively fostering collaboration, empathy, and mutual respect among all members of a community or workforce.

WHAT IS GESI?

Gender equality and social inclusion (GESI) is an approach used in development projects, policies, and programs to ensure that gender equality and social inclusion considerations are integrated into all aspects of planning, implementation, monitoring, and evaluation. GESI aims to address inequalities and discrimination based on gender, ethnicity, caste, religion, disability, age, sexual orientation, and other factors to ensure that all individuals have equal access to opportunities, resources, and benefits. This approach recognizes the importance of promoting diversity, empowering marginalized groups, and promoting social justice to achieve sustainable development outcomes.

Figure 1(a picture depicting gender equality and social inclusion)

IMPORTANCE OF GESI IN CLIMATE CHANGE DISCUSSIONS

Climate change is not neutral neither are the actions of humans. Climate change affects both male and female.

From recent research, climate change causes disadvantaged groups to suffer unequally from its adverse effects, resulting in greater subsequent inequality. The solutions to climate change therefore cannot be gender blind rather it must include deliberate actions of the male, female and the PWDs. The process of gender mainstreaming will ensure the systematic consideration of the differences between the conditions, situations and need of women and men, and the integration of gender equality concerns into program design.

THE IMPACT OF GENDER STEREOTYPES, CULTURAL NORMS, AND INSTITUTIONALIZED DISCRIMINATION ON INDIVIDUALS AND COMMUNITIES

Psychological Well-being: Gender stereotypes and cultural norms can lead to internalized beliefs about one's worth, capabilities, and role in society, causing stress, anxiety, and low self-esteem, particularly among marginalized individuals.

Career Opportunities: Institutionalized discrimination based on gender can limit career advancement and economic opportunities for individuals, contributing to wage gaps, occupational segregation, and glass ceilings.

Health Outcomes: Cultural norms around masculinity and femininity can influence health behaviours and access to healthcare, leading to disparities in health outcomes and wellness-seeking behaviours.

Social Cohesion: Gender stereotypes and cultural norms can perpetuate divisions and hierarchies within communities, reinforcing power dynamics and social inequalities based on gender, race, class, sexuality, and other intersecting identities.

Economic Development: Institutionalized discrimination in employment, education, and entrepreneurship hinders the full participation of women and marginalized groups in the economy, limiting overall productivity and prosperity within communities.

Social Justice: Addressing gender stereotypes and discriminatory practices is essential for promoting social justice and human rights, as it enables individuals to live free from discrimination, violence, and oppression, fostering inclusive and equitable societies.

Inter-sectionalism: Intersectional analysis reveals how gender stereotypes, cultural norms, and institutionalized discrimination intersect with other forms of oppression, such as racism, albinism, homophobia, and xenophobia, to create compounded disadvantages for marginalized individuals and communities. For example, women of colour may face unique challenges due to the intersecting impacts of gender, race, and class discrimination, resulting in disparities in employment, healthcare, housing, and criminal justice outcomes.

Intergenerational Impact: Gender stereotypes and cultural norms are often transmitted across generations through socialization processes, family dynamics, media representations, and educational systems, perpetuating traditional gender roles and expectations. Institutionalized discrimination can have lasting intergenerational effects on individuals and communities, reinforcing cycles of poverty, marginalization, and limited opportunities for social mobility.

Activity plan

- Act a drama that is gender inclusive
- Celebrate achievement and successes in promoting GESI through story telling initiative.

SUSTAINABLE DEVELOPMENT GOALS (SDGS)

"The greatest threat to our planet is the belief that someone else will save it."

Robert Swan

Introducing the sustainable development goals

Subject

This section explains the sustainable development goals, its relevance, principles and dimensions of sustainable development goals.

Learning outcome

- Learners can explain what the SDGs are
- Learners will understand the SDGs and their interconnections and the global challenges they addresses
- Learners will develop problem-solving skills to address challenges related to SDGs

Find out more

For more information about the SDGs visit www.globalgoals.org

INTRODUCTION TO THE UNITED NATIONS SDGS

The United Nations Sustainable Development Goals (SDGs) are a set of 17 interconnected goals aimed at addressing global challenges and fostering sustainable development worldwide. Adopted by the 193 United Nations Member States in September 2015, the SDGs provide a comprehensive and universal framework to guide efforts toward improving the well-being of people, protecting the planet, and ensuring prosperity and a sustainable planet for all. The SDGs cover a wide range of issues, including poverty, hunger, health, education, gender equality, clean water, affordable and clean energy, decent work, industry and innovation, reduced inequalities, 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. Each goal is accompanied by specific targets and indicators to measure progress. The overarching aim is to achieve these goals by 2030, promoting a collaborative and inclusive approach involving governments, businesses, civil society, and individuals. The SDGs emphasize the interconnectivity of global challenges, acknowledging that progress in one area often relies on advancements in others. By addressing these goals collectively, the international community aims to create a more just, sustainable, and resilient world. The SDGs serve as a roadmap for global action, encouraging countries to implement policies and initiatives that contribute to a better future for people and the planet.

RELEVANCE OF SDGS TO CLIMATE ACTION AND ADVOCACY

The Sustainable Development Goals (SDGs) are highly relevant to climate action and advocacy as they provide a comprehensive framework for addressing environmental sustainability, social equity, and economic development. Here's how the SDGs intersect with climate action and advocacy:

SDG 7: Affordable and Clean Energy:

Access to affordable and clean energy is crucial for reducing dependence on fossil fuels and mitigating climate change. SDG 7 promotes the use of renewable energy sources.

SDG 9: Industry, Innovation, and Infrastructure:

Advancements in technology and sustainable infrastructure contribute to climate resilience and help transition towards a low-carbon economy.

SDG 11: Sustainable Cities and Communities:

Sustainable urban development is essential for reducing emissions, promoting energy efficiency, and building resilient communities. This goal aligns with climate action by addressing the environmental impact of cities.

SDG 12: Responsible Consumption and Production:

Encouraging sustainable consumption and production patterns helps reduce the ecological footprint, contributing to climate change mitigation.

SDG 13: Climate Action:

This goal specifically focuses on urgent action to combat climate change and its impacts. It emphasizes the need for countries to strengthen resilience and adaptive capacity to climate-related disasters.

SDG 14: Life Below Water and SDG 15: Life on Land:

Protecting ecosystems, both underwater and on land, is crucial for biodiversity and climate regulation. Healthy ecosystems play a role in absorbing carbon dioxide and mitigating climate impacts.

SDG 17: Partnerships for the Goals:

Collaboration is vital for effective climate action. SDG 17 emphasizes the need for partnerships between governments, businesses, and civil society to mobilize resources and share knowledge for climate advocacy and solutions.

(Figure of the SDGs that relates to climate action)

Advocacy for climate action often involves promoting policies, practices, and initiatives aligned with these SDGs. The goals provide a common language and framework for advocating for sustainable development practices that address climate change and its interconnected challenges. Climate advocacy efforts can leverage the broader context of the

SDGs to demonstrate the linkages between climate action and a comprehensive, sustainable development agenda

PRINCIPLES AND DIMENSIONS OF SUSTAINABLE DEVELOPMENT

The principles and dimensions of sustainable development are guided by the idea of meeting the needs of the present without compromising the ability of future generations to meet their own needs. Several key principles and dimensions characterize sustainable development.

PRINCIPLES OF SUSTAINABLE DEVELOPMENT:

Interdependence:

Recognise the interconnectedness of economic, social and environmental aspects and also understanding the fact that actions in one area can impact other.

Equity and Social Justice:

Promotes fairness and justice, also ensure that the benefits of development are shared equitably among different social groups and future generations.

Participation and Engagement:

Advocates for inclusive decision-making processes; involving all stakeholders including local communities in shaping development policies and initiatives.

Precautionary Approach:

Emphasizes the need to anticipate and prevent potential environmental and social harm, even in the absence of scientific certainty.

Intergenerational Equity:

Considers the needs and well-being of future generations; ensuring that the current generation does not compromise the ability of future generations to meet their own needs.

Conservation of Biodiversity:

Encourages the protection and sustainable use of biodiversity; recognizing its crucial role in ecosystem services and human well-being.

DIMENSIONS OF SUSTAINABLE DEVELOPMENT:

Economic Dimension:

It focuses on fostering economic growth that is inclusive, environmentally sustainable and socially equitable.

Social Dimension:

It addresses social well-being, including aspects such as poverty eradication, hunger, education, healthcare, gender equality and social inclusion.

Environmental Dimension:

It promotes responsible use and conservation of natural resources, reducing environmental degradation, and mitigating the impacts of climate change.

Cultural Dimension:

It acknowledges the importance of cultural diversity and heritage, ensuring that development respects and enhances local cultures and identities.

Institutional and Governance Dimension:

It calls for effective governance structures, transparency, and accountability to support sustainable development initiatives.

Technological Dimension:

This encourages the development and use of environmentally friendly and socially responsible technologies that contribute to sustainable development.

Ethical Dimension:

It incorporates ethical considerations in decision-making processes, ensuring that development is guided by values and principles that prioritize human dignity and well-being.

By integrating these principles and dimensions, sustainable development aims to create a harmonious and balanced approach to economic growth, social progress, and environmental protection.

DEFINE KEY TERMS RELATED TO CLIMATE ACTION AND ADVOCACY

Mitigation:

These are actions taken to reduce or prevent the emission of greenhouse gases, thus mitigating the impacts of climate change.

Adaptation:

It implies strategies and measures designed to help societies and ecosystems cope with the impacts of climate change.

Resilience:

It is the ability of individuals, communities and ecosystems to withstand and recover from the adverse impacts of climate change.

Carbon Footprint:

The total amount of greenhouse gases, primarily carbon dioxide that is emitted directly or indirectly by an individual, organization, event, or product.

Renewable Energy:

Energy derived from sources that are naturally replenished, such as solar, wind, and hydropower, which contribute to reducing reliance on fossil fuels.

Climate Justice:

This is the fair treatment of all people and the equitable sharing of the burdens and benefits of climate change mitigation and adaptation, particularly considering the disproportionate impacts on vulnerable communities.

COP26 (Conference of the Parties):

The 26th UN Climate Change Conference, where world leaders, negotiators, and stakeholders convene to discuss and negotiate global climate policies.

Advocacy Campaign:

Coordinated efforts to promote specific actions, policies, or changes related to climate change. Advocacy campaigns aim to influence public opinion and decision-makers.

Carbon Offset:

A reduction in emissions of greenhouse gases made in one place to compensate for emissions produced elsewhere often through projects supporting renewable energy or reforestation.

Climate Action Plan:

This is a strategic document outlining specific actions, goals and timelines for addressing climate change at various levels such as local, regional or national government.

Youth Climate Activism:

It is the collective efforts of young people globally advocating for climate action and demanding policies to address the climate crisis.

These terms provide a foundation for understanding the various aspects of climate change and the advocacy efforts aimed at addressing its challenges.

Activity

- Have the learners identify problems and ask them to identify which of the SDGs addresses them.
- To end the lesson, ask each learner to write a sentence reflecting their views on the SDGs.
- Divide participants into groups of 4; give each an exercise sheet and have them draw and name the 17 SDGs.

QUESTIONNAIRE

Name:…….……

Sex: Male ☐ Female ☐ Others ☐

Age: 14-17 ☐ 18-30 ☐ 30 and above ☐

School/Community: ……

1. Are you familiar with the concept of sustainable development goals (SDGs)?
   Yes ☐ No ☐

2. Which of the following SDGs do you believe are the most pressing issues facing our world today? (Select all that apply)

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 ☐ Climate Action ☐

Responsible Consumption and Production ☐ Life below Water ☐

Life on Land ☐ Peace, Justice, and Strong Institutions ☐

Partnerships for the Goals ☐

3. Are you aware of any initiatives or projects in your community that are aligned with the SDGs? If yes, please describe.

……
……
……
……
……
……
……..

4. What do you believe are the biggest challenges hindering the achievement of the SDGs?

……
……
……

……
……
……
……..

5. Do you think education plays a crucial role in advancing sustainable development? If yes, how can education systems be improved to better promote awareness and action on SDGs?

……
……
……
……
……
……
……..

6. How do you think global cooperation and partnerships can contribute to the achievement of the SDGs?

……
……
……
……
……
……
……..

7. What role do you see yourself playing in advancing sustainable development goals in your community or globally?

……
……
……
……
……
……
……..

ADVOCACY ON CLIMATE CHANGE

"If you really think that the environment is less important than the economy, try holding your breath while you count your money."

-Guy McPherson

Subject

This section explains the importance of community engagement and empowerment in advocating for climate action while emphasizing the need for resilience building efforts in the face of climate change impacts.

Learning outcome

- To develop knowledge of key advocacy strategies and tactics for promoting climate action.
- To explore actions to mitigate climate change.
- Enhance community skills to effectively convey information about climate change issues.
- Embrace a sense of social responsibility and environmental stewardship in advocating for equitable and sustainable solutions to climate change.
- Understand the policy making process, the role of advocacy in influencing climate related polices and legislation, learn how to conduct policy analysis, develop advocacy campaigns and engage with policy makers to promote climate friendly policies and initiatives.

OVERVIEW OF EFFECTIVE ADVOCACY STRATEGIES FOR PROMOTING SUSTAINABLE PRACTICES

Advocacy for promoting sustainable practices involves strategic efforts to influence policies, behaviours, and attitudes towards environmentally friendly and socially responsible actions. Here's an overview of effective advocacy strategies in this context:

Raise Awareness:

Develop campaigns to educate the public, policymakers, and stakeholders about the importance of sustainable practices, emphasizing the environmental, social, and economic benefits.

Leverage Social Media and Digital Platforms:

Utilize social media, online campaigns, and digital platforms to reach a broad audience quickly. Engage influencers and create shareable content to amplify your message.

Community Engagement:

Establish partnerships with local communities, businesses, and organizations. Involve community members in decision-making processes and highlight the positive impacts of sustainable practices on their lives.

Policy Advocacy:

Engage with policymakers at local, regional, and national levels to advocate for policies that support sustainability. Provide data, research, and case studies to demonstrate the effectiveness of sustainable initiatives.

Corporate Engagement:

Encourage businesses to adopt sustainable practices through advocacy efforts. Highlight the business benefits of sustainability, such as cost savings, enhanced reputation, and increased consumer loyalty.

Collaborate with NGOs and Non-profits:

Partner with non-governmental organizations (NGOs) and non-profits working on sustainability. Collaborative efforts amplify the impact of advocacy campaigns and provide diverse perspectives.

Educational Programs:

Develop educational initiatives targeting schools, universities, and workplaces. Foster a culture of sustainability by integrating eco-friendly practices into curricula and workplace policies.

Media Engagement:

Work with traditional media outlets to secure coverage of sustainability issues. The media should craft compelling stories, press releases, and op-eds to generate public interest and support.

Coalition Building:

Form alliances with other advocacy groups, environmental organizations, and community leaders. A united front enhances advocacy efforts and increases influence.

Public Events and Demonstrations:

Organize public events, demonstrations, and eco-friendly activities to raise awareness and engage the community. These events can attract media attention and spark public interest.

Monitoring and Evaluation:

Continuously monitor and evaluate the impact of advocacy efforts. Collect data on the adoption of sustainable practices, policy changes, and shifts in public opinion to refine strategies.

Celebrate Success Stories:

Showcase successful examples of individuals, businesses, or communities adopting sustainable practices. Highlighting positive outcomes reinforces the benefits of sustainability.

Inclusive Messaging:

Advocates should craft messages that will resonate with diverse audiences. Consider cultural, social and economic factors to ensure inclusivity and broad appeal.

Advocate for Green Technologies:

Support and promote the adoption of environmentally friendly technologies. Advocate for incentives and policies that encourage the development and use of sustainable technologies.

Youth Engagement:

Involve young people in advocacy efforts. Youth often play a vital role in driving change and can be powerful advocates for sustainability.

By combining these strategies, advocates can create a comprehensive and impactful approach to promote sustainable practices and contribute to a more environmentally conscious and resilient society.

ACTIONS TO MITIGATE CLIMATE CHANGE

Mitigating climate change involves a combination of individual, community, corporate, and governmental actions. Here are key actions to help reduce greenhouse gas emissions and address climate change:

Transition to Renewable Energy:

Shift from fossil fuels to renewable energy sources like solar, wind, and hydropower for electricity generation.

Energy Efficiency:

Implement energy-efficient practices in homes, buildings, and industries to reduce overall energy consumption.

Sustainable Transportation:

Use public transportation, carpooling, cycling, walking, or electric vehicles to minimize carbon emissions from transportation.

Carbon Capture and Storage:

Invest in technologies that capture and store carbon dioxide emissions from industrial processes and power plants.

Afforestation and Reforestation:

Plant trees and restore forests to absorb carbon dioxide from the atmosphere and enhance biodiversity.

Reducing Deforestation:

Implement measures to reduce deforestation and promote sustainable land use practices.

Circular Economy Practices:

Adopt circular economy principles to minimize waste, recycle materials, and promote a more sustainable approach to consumption.

Reducing Meat Consumption:

Choose plant-based diets or reduce meat consumption to decrease the environmental impact of livestock farming.

Waste Reduction and Recycling:

Reduce waste generation, recycle materials, and promote responsible waste management practices.

Advocacy and Education:

Advocate for climate-friendly policies, raise awareness about climate change, and educate communities about sustainable practices.

Green Building Design:

Design and construct buildings with energy-efficient features, sustainable materials, and green technologies.

Policy and Legislation:

Support and advocate for policies and legislation that promote renewable energy, carbon pricing, and other climate-friendly initiatives.

Adopting Green Technologies:

Encourage the development and adoption of clean and green technologies in various sectors.

Water Conservation:

Implement water-saving practices, reduce water waste, and promote sustainable water management.

Climate-Friendly Agriculture:

Adopt sustainable agricultural practices, agroforestry, and precision farming to reduce emissions from the agriculture sector.

Corporate Responsibility:

Encourage businesses to adopt environmentally responsible practices, reduce emissions, and incorporate sustainability into their operations.

Investment in Climate Solutions:

This involves direct investments towards climate solutions, innovations and the development of sustainable technologies.

Community Engagement:

Involve communities in climate action, empowering them to contribute to sustainable practices and resilience.

Carbon Offsetting:

Support projects that offset carbon emissions, such as reforestation initiatives or renewable energy projects.

International Cooperation:

Collaborate with the global community to address climate change collectively, respecting international agreements like the Paris Agreement.

Individuals, communities, businesses, and governments all play crucial roles in mitigating climate change. A collective and comprehensive approach is essential to create meaningful and lasting impact.

Activity plan

1. Planting of trees in the environment as a means for climate change
2. Facilitate workshops focused on effective advocacy for climate action
3. Do a research about the environment
4. Each learner should identify which renewable energy is associated to the 17 sustainable development goals

AIR QUALITY

"A fair, just, equitable and urgent transition from dirty fossil fuels to clean energy is essential to avoid the worst of climate chaos and spur sustainable development."

-ANTONIO GUTERRES
United Nations Secretary-General

Subject

This section talks about the greenhouse gases, ways to mitigate the emissions of carbon and the promotion of renewable energies in our daily activities.

Objective

To use the global goals as a catalyst for learners in identifying a local community issue, help solve the issues and create an action plan to get started.

Learning outcome

- The learners should be able to identify resources and activities that increases the emission of carbon in their community
- The learners should be able to define carbon dioxide
- The learners should be able to understand the impact of carbon in the environment
- The learners should be able to advocate for the use of renewable energies

OVERVIEW OF THE EMISSION OF CARBON DIOXIDE AND ITS IMPACT IN THE ENVIRONMENT

The emission of carbon dioxide (CO_2) has significant impacts on the environment, primarily due to its role as a greenhouse gas.

Climate Change: CO_2 is a major contributor to climate change. When released into the atmosphere, it traps heat, leading to global warming and altering weather patterns. Excessive emissions of carbon dioxide and other greenhouse gases from human activities, such as burning fossil fuels and deforestation, have led to climate change. This results in global warming, rising sea levels, altered precipitation patterns, and more frequent extreme weather events such as hurricanes, droughts, and heat waves.

Ocean Acidification: Approximately one-fourth of the CO_2 emitted by human activities is absorbed by the oceans. This leads to ocean acidification, which harms marine life, particularly organisms with calcium carbonate shells or skeletons like corals, shellfish, and plankton.

Impact on Ecosystems: Climate change driven by CO_2 emissions can disrupt ecosystems, leading to habitat loss, shifts in species distribution, and loss of biodiversity. This can have cascading effects on food chains and ecosystem services upon which human societies depend.

Health Effects: Carbon-based pollutants, including carbon monoxide (CO) and particulate matter (PM), contribute to air pollution, which negatively impacts human health and ecosystems. Breathing polluted air can cause respiratory diseases, cardiovascular problems, and premature death and other health issues, particularly in vulnerable populations such as children, the elderly, and those with pre-existing health conditions.

Deforestation: Deforestation and land-use changes release carbon stored in forests into the atmosphere, contributing to carbon emissions and reducing the planet's capacity to absorb CO2 through photosynthesis.

Economic Costs: The impacts of CO2 emissions on the environment can have significant economic costs, including damage to infrastructure, loss of agricultural productivity, increased healthcare expenses, and loss of livelihoods in sectors such as fishing and agriculture.

Overall, while carbon is essential for life on Earth, human activities have disrupted the natural carbon cycle, leading to significant environmental challenges such as climate change and ocean acidification. Efforts to mitigate these effects include reducing emissions, preserving ecosystems that sequester carbon, and transitioning to renewable energy sources. Reducing carbon emissions is crucial to mitigating these environmental impacts and addressing climate change. Transitioning to renewable energy sources, improving energy efficiency, and implementing policies to limit emissions are key strategies in this effort.

WAYS TO MITIGATE CARBON DIOXIDE

It is a collective action to limit climate change. In order to save our air from pollution, let us join the United Nations to take these 10 actions to preserve and sustain a liveable planet for not only now but also for generations to come by reducing the emission of carbon per person to 2.5 tons per person by 2030.

1. **Save energy at home:** electricity and heat are mostly powered by coal, oil and gas. Do use less energy by lowering your heating and cooling, switching to LED light bulbs and energy efficient electric appliances.

2. **Walk, bike or take a public transport:** the numbers of vehicles on the road are much and these vehicles uses diesel or gasoline which increases the emission of greenhouse gas on the environment. Walking or riding a bike instead of driving will reduce greenhouse emissions and help your health and fitness.

3. **Eat more vegetables:** eating more fruits, vegetables, legumes, nuts, whole grains and seeds and less of meat and dairy can significantly lower your environmental impact.
4. **Consider your travel:** air planes produces large amounts of greenhouse gases into the atmosphere. Taking fewer flights is one of the fastest ways to reduce environmental impact. Where possible, maximise virtual meetings, take a train or skip the trip.

5. **Throw away less food:** food rotted on a land produces a powerful greenhouse gas called methane. When you throw food away, you are wasting the resources and energy that were used to grow, produce, package and transport it.

6. **Reduce, reuse, repair and recycle:** fabrics, electronics and other items we buy causes the emission of carbon at each point in production. To protect our climate, buy fewer things, shop second-hand, repair what you can and recycle.

7. **Change your homes source of energy**: ask your utility company if your home energy comes from oil, coal or gad. If possible, see if you can switch to renewable sources such as wind or solar. There are affordable solar panels you can put on your roof to generate energy for your home.

8. **Switch to an electric vehicle:** consider buying an electric car if you plan to buy one. Electric cars help reduce air pollution and cause significantly fewer greenhouse gas emissions than gas or diesel-powered vehicles.

9. **Make your money count:** everything we spend money on affects the planet. To reduce your environmental impact, buy local and seasonal foods and choose products from companies who use resources responsibly and are committed to cutting their gas emission and waste.

10. **Speak up:** speak up and get others to join in taking action. It is one of the quickest and most effective ways to make a difference. Climate action is a task for all of us. Talk to friends, family, leaders' et al to act now. Design initiative programs to advocate for a healthy environment.

WHAT IS RENEWABLE ENERGY?

Renewable energies are energies that never runs out and which comes from natural sources. These energies replenished on a human timescale such as sunlight, wind, rain, tides, waves, biomass and geothermal heat. These energy sources are considered sustainable and do not deplete finite resources like fossil fuels.

Figures of renewable energy like wind, hydro, solar, biomass, tidal, geothermal

Wind: Turbines (windmills) driven by the wind
Hydro: Turbines driven by a flow of water like a river
Solar: From the sun
Biomass: Burning solid plant fuels
Geothermal: Natural heat from the earth.

When we use these sources of power, we can do all things that we could do with coal, oil and gas. These renewable energies do not create carbon dioxide. There is less pollution and harm to the environment.

THE GREAT GREEN WALL

The Great Green Wall is an initiative aimed at combating desertification and land degradation from the East to the West coast of Africa. It is a clear indication of hope, resilience and adaptation from the communities across Africa. The initiative involves planting a wall of trees and vegetation across the southern edge of the Sahara Desert to create a barrier against desertification, improve soil fertility and promote biodiversity. The vision is to restore degraded land, combat climate change and provide sustainable livelihoods for millions of people living in the region. Once complete, the Great Green Wall will be the largest living structure on the planet, 3 times the size of the Great Barrier Reef.

Figure of the great green wall

Great Green Wall Achievements Nigeria by 2024

As of 2024, the Great Green Wall initiative in Nigeria has made significant achievements in its efforts to combat desertification, improve land management, and promote sustainable development in the country. Some of the key achievements include:

Tree Planting: The initiative has facilitated the planting of millions of trees across the northern regions of Nigeria, particularly in states such as Kano, Katsina, Sokoto, and Zamfara. These trees help to stabilize soils, prevent erosion, and improve local microclimates.

Community Engagement: The Great Green Wall project has actively involved local communities in tree planting activities, land restoration projects, and sustainable land management practices. This engagement has empowered communities to take ownership of environmental conservation efforts and has provided alternative livelihood opportunities.

Economic Benefits: By promoting agroforestry and sustainable land management practices, the initiative has contributed to improved agricultural productivity and increased resilience to climate change among rural communities. This has led to enhanced food security, increased incomes, and reduced vulnerability to environmental shocks.

Biodiversity Conservation: The restoration of degraded landscapes through the Great Green Wall initiative has helped to conserve biodiversity by creating habitats for native plant and animal species. This contributes to the preservation of ecosystem services and enhances the resilience of ecosystems to environmental stressors.

Policy Support: The Nigerian government has shown commitment to the Great Green Wall initiative by implementing supportive policies and providing resources for its implementation. This includes the establishment of institutional frameworks, funding mechanisms, and partnerships with international organizations and donors.

Overall, the achievements of the Great Green Wall initiative in Nigeria by 2024 demonstrate progress towards the goals of combating desertification, improving land management, and promoting sustainable development in the country's northern regions. However, continued efforts and investment will be needed to sustain and scale up these achievements in the years to come.

Activity plan

- learners should map their communities and identify issues
- Learner should discuss and generate different ideas to a solution in their community issues
- Share their action plans with the world largest lessons

SKILL DEVELOPMENT

"Climate change will test our intelligence, our compassion and our will, but we are equal to that challenge."

-Justin Trudeau

Subject

This section outlines the skills for climate action plan and implementation.

Learning outcome

- The learners should be able to learn ways and implement skills in combating climate change for a more sustainable planet not just for now, but for future generations to come.

SKILL DEVELOPMENT FOR CLIMATE ACTION, ADVOCACY AND SUSTAINABLE DEVELOPMENT

Mitigating climate change involves a combination of individual, community, corporate, and governmental actions. Here are key actions to help reduce greenhouse gas emissions and address climate change:

Transition to Renewable Energy:

Shift from fossil fuels to renewable energy sources like solar, wind, and hydropower for electricity generation.

Energy Efficiency:

Implement energy-efficient practices in homes, buildings, and industries to reduce overall energy consumption.

Sustainable Transportation:

Use public transportation, carpooling, cycling, walking, or electric vehicles to minimize carbon emissions from transportation.

Carbon Capture and Storage:

Invest in technologies that capture and store carbon dioxide emissions from industrial processes and power plants.

Afforestation and Reforestation:

Plant trees and restore forests to absorb carbon dioxide from the atmosphere and enhance biodiversity.

Reducing Deforestation:

Implement measures to reduce deforestation and promote sustainable land use practices.

Circular Economy Practices:

Adopt circular economy principles to minimize waste, recycle materials, and promote a more sustainable approach to consumption.

Reducing Meat Consumption:

Choose plant-based diets or reduce meat consumption to decrease the environmental impact of livestock farming.

Waste Reduction and Recycling:

Reduce waste generation, recycle materials, and promote responsible waste management practices.

Advocacy and Education:

Advocate for climate-friendly policies, raise awareness about climate change, and educate communities about sustainable practices.

Green Building Design:

Design and construct buildings with energy-efficient features, sustainable materials, and green technologies.

Policy and Legislation:

Support and advocate for policies and legislation that promote renewable energy, carbon pricing, and other climate-friendly initiatives.

Adopting Green Technologies:

Encourage the development and adoption of clean and green technologies in various sectors.

Water Conservation:

Implement water-saving practices, reduce water waste, and promote sustainable water management.

Climate-Friendly Agriculture:

Adopt sustainable agricultural practices, agroforestry, and precision farming to reduce emissions from the agriculture sector.

Corporate Responsibility:

Encourage businesses to adopt environmentally responsible practices, reduce emissions, and incorporate sustainability into their operations.

Investment in Climate Solutions:

Investments should be directed towards climate solutions, innovation and the development of sustainable technologies.

Community Engagement:

Involve communities in climate action, empowering them to contribute to sustainable practices and resilience.

Carbon Offsetting:

Support projects that offset carbon emissions, such as reforestation initiatives or renewable energy projects.

International Cooperation:

Collaborate with the global community to address climate change collectively, respecting international agreements like the Paris Agreement.

Individuals, communities, businesses, and governments all play crucial roles in mitigating climate change. A collective and comprehensive approach is essential to create meaningful and lasting impact.

Community-led approaches play a crucial role in climate action for advocacy and sustainable development. Here are key elements and strategies for fostering community-led initiatives in this context:

Participatory Decision-Making:

Involve community members in decision-making processes related to climate action. This ensures that initiatives reflect local needs, priorities, and cultural considerations.

Local Knowledge Integration:

Recognize and integrate local knowledge, practices, and traditions into climate action plans. Leveraging traditional ecological knowledge can enhance the effectiveness and sustainability of initiatives.

Capacity Building:

Empower community members through training programs and capacity-building initiatives. Provide education on climate science, sustainable practices, and the potential impacts of climate change.

Community-Based Monitoring:

Establish mechanisms for community-based monitoring of climate-related changes. Engage residents in data collection and analysis to enhance local resilience and adaptability.

Tailored Communication Strategies:

Develop communication strategies that resonate with the community. Use local languages, cultural references, and communication channels to effectively convey climate-related information.

Inclusive Representation:

Ensure diverse representation within community leadership and decision-making structures. Include marginalized groups, women, and youth to foster inclusive and equitable climate action.

Sustainable Livelihoods:

Integrate climate-resilient livelihood strategies into community development plans. This may include promoting sustainable agriculture, eco-tourism, and other green economic activities.

Ecosystem-Based Adaptation:

Implement ecosystem-based adaptation strategies that align with local ecosystems. This includes reforestation, watershed management, and sustainable land use practices.

Collaborative Partnerships:

Foster partnerships between community organizations, local governments, NGOs, and businesses. Collaborative efforts can enhance resource mobilization and the impact of climate initiatives.

Cultural Preservation:

Integrate climate action with cultural preservation efforts. This can involve projects that protect culturally significant landscapes or practices threatened by climate change.

Social Cohesion and Resilience:

Strengthen social cohesion within communities to enhance their resilience. Building strong social networks enables better response and recovery from climate-related challenges.

Early Warning Systems:

Establish community-based early warning systems for extreme weather events. Empower residents to understand and respond to climate-related risks effectively.

Youth Engagement:

Involve youth in climate action, recognizing their potential as change agents. Support youth-led initiatives, education, and leadership development.

Demonstration Projects:

Implement small-scale, community-driven demonstration projects. These projects can serve as models for larger-scale initiatives and showcase the benefits of sustainable practices.

Adaptation Planning:

Develop community-driven climate adaptation plans. These plans should address vulnerabilities, prioritize actions, and integrate local perspectives.

Financial Inclusion:

Promote financial inclusion and access to climate financing for community-led projects. Empower communities to access funding opportunities for sustainable development.

Monitoring and Evaluation:

Establish mechanisms for on-going monitoring and evaluation of community-led initiatives. Regular assessments ensure adaptive management and continuous improvement.

Traditional Practices Integration:

Integrate traditional practices that contribute to climate resilience. This may include traditional water management systems, agro ecological practices, and natural resource management.

Community-led approaches not only empower local residents but also foster a sense of ownership and commitment to sustainable development. By recognizing and leveraging local knowledge and resources, these approaches contribute to more effective and culturally sensitive climate action and advocacy.

NATURE BASED SOLUTION TO ADDRESSING CLIMATE CHANGE FROM A YOUTH PERSPECTIVE

In addressing climate change, engage the youths in tree planting initiatives, promoting sustainable practices, and advocating for eco-friendly policies are impactful nature-based solutions. Youth involvement fosters a sense of environmental responsibility and contributes to building a sustainable future.

Wetlands are ecosystems where land is saturated with water, either permanently or seasonally. They include marshes, swamps, bogs, and ponds. Wetlands play a crucial role in supporting biodiversity, acting as habitats for various species, and providing valuable ecosystem services such as water filtration, flood control, and carbon sequestration. Implementing and restoring wetlands can be a nature-based solution to address climate change. Wetlands act as carbon sinks, capturing and storing large amounts of carbon dioxide. Additionally, they provide habitat for diverse species and offer natural flood control, contributing to overall ecosystem resilience.

Design a picture of global goals community action plan

SUMMARY

Throughout this journey, we have explored crucial concepts and practical strategies for addressing environmental challenges and fostering sustainable practices. In conclusion, let's reflect on the key insights we've gained:

Importance of Collective Action: Climate change and sustainable development require collective effort. By working together, we can amplify our impact and create meaningful change at local, national, and global levels.

Empowerment through Advocacy: Advocacy plays a vital role in driving policy change and raising awareness about environmental issues. As advocates, we have the power to influence decision-makers and inspire others to take action.

Commitment to Sustainable Practices: Sustainable development involves balancing economic, social, and environmental priorities. By embracing sustainable practices in our daily lives and promoting green initiatives, we can contribute to a healthier planet for current and future generations.

As you embark on your journey as climate advocates and champions of sustainability, remember that your actions matter. Whether it's participating in community clean-up events or advocating for renewable energy policies, or promoting eco-friendly practices in your workplace, every effort counts. I encourage you to stay informed, stay engaged, and continue learning about climate action and sustainable development. Together, we can build a more resilient and sustainable future for all.

Thank you for your dedication and commitment to making a difference. Let's work together to create a greener, more sustainable world.