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Item No.

UNIVERSITY OF MUMBAI

Guidelines For Field Visit and Case Studies

(To be introduced from Academic Year 2024-25)

Guidelines For Field Visit and Case Studies

Suggested structure of Case study

Case studies on environment and sustainable development should typically cover several key points to provide a comprehensive understanding of the initiative:

- **Title of the case study:** Appropriate tilte be given that specifies the core of the case.
- **Background:** Briefly describe the situation before the sustainable development effort began. What environmental challenges were present? What economic or social factors played a role?
- **The Initiative:** Explain the core concept of the project. What specific actions were taken to address the environmental issue? Was it a government program, a grassroots movement, or a corporate initiative?
- **Review of Literature related to the case:** report and reflect on some relevant reference material available on the focus of the case
- **Implementation:** Discuss how the initiative was put into action. Who were the key stakeholders involved? What challenges arose during implementation?
- **Outcomes:** Analyze the results of the initiative. Were the environmental goals achieved? What were the social and economic impacts? Are the results sustainable in the long term?
- **Lessons Learned:** Highlight the key takeaways from the case study. What are the best practices that can be applied elsewhere? Are there any limitations or unintended consequences to consider?

By covering these points, a case study offers a valuable lens to examine the complexities of sustainable development and its real-world applications.

List of Case Studies: International (Indicative)

- **The Montreal Protocol:** This international treaty successfully phased out the production of ozone-depleting substances, protecting the ozone layer and mitigating the harmful effects of ultraviolet radiation.
- **The Green Belt Movement:** Founded by environmental activist Wangari Maathai, this Kenyan organization has planted over 51 million trees, improving soil fertility, reducing erosion, empowering women, and creating economic opportunities.
- **Sweden's Circular Economy:** Sweden is a leader in transitioning to a circular economy, where resources are used for as long as possible, minimizing waste and environmental impact.
- **Germany: Energiewende (Energy Transition): Germany's ambitious policy for transitioning to a renewable energy-based economy.** Expansion of renewable energy sources, energy efficiency, and reduced greenhouse gas emissions. There is a significant increase in renewable energy usage, but also challenges with energy prices and grid stability.
- **Costa Rica's Ecotourism Boom: Costa Rica's focus on sustainable development and ecotourism has not only protected its rainforests and wildlife but has also become a significant source of revenue for the country.**
- **The Great Barrier Reef Marine Park Authority: This Australian agency manages the world's largest coral reef ecosystem, balancing conservation efforts with tourism and local livelihoods.**

List of Case Studies: National (Indicative)

- **India's Namami Gange Programme: The Namami Gange Programme is a large-scale initiative to clean the Ganges River, one of India's most sacred rivers. The program tackles water pollution through infrastructure development, wastewater treatment, and industrial regulation.**
- **India's Solar Energy Mission: India has made remarkable progress in adopting solar energy as a renewable and sustainable alternative to fossil fuels. The government's ambitious program, known as the Jawaharlal Nehru National Solar Mission (JNNSM), aims to achieve a massive increase in solar power capacity in the country.**
- **The Waste Pickers' Movement in India:** The informal waste management sector in India, largely driven by waste pickers, plays a crucial role in collecting and recycling waste. However, these waste pickers often face challenging working conditions and social exclusion.
- **Joint Forest Management (JFM) Program:** This program promotes community participation in the protection and management of forests. Local communities are involved in decision-making, planting trees, and preventing deforestation. JFM has shown success in improving forest cover, providing livelihoods for rural communities, and fostering a sense of ownership towards natural resources.
- **Odd-Even Policy in Delhi:** This policy aimed to reduce air pollution in Delhi by restricting private car usage based on license plate numbers. While the policy faced challenges with enforcement and public convenience, it brought attention to the issue of air pollution and sparked discussions about sustainable transportation solutions.
- **Solar Impulse Landing in Ahmedabad: In 2018, the solar-powered airplane Solar Impulse landed in Ahmedabad, India, during its round-the-world journey. This event highlighted the potential of renewable energy and inspired India's clean energy ambitions.**
- **Satpura Tiger Reserve's Anti-Poaching Efforts: The Satpura Tiger Reserve in Madhya Pradesh has implemented successful anti-poaching strategies, including increased patrolling, community engagement programs, and deploying technology like camera traps. These efforts have led to a significant increase in tiger populations, showcasing the importance of wildlife conservation.**
- **Himachal Pradesh's Eco-tourism Initiatives: The state of Himachal Pradesh has adopted eco-tourism practices to promote responsible tourism and conserve its natural beauty. Initiatives include promoting homestays, encouraging trekking through designated trails, and minimizing waste generation in tourist areas**

Any other case study Local, National or International that demonstrate concerns of environment and sustainable development.

Suggested format for Field Visit for witnessing/ understanding Local/Regional Environmental initiatives and / or concerns

Here's a breakdown of the key points to cover during a field visit to identify local/regional environmental issues:

Preparation:

- **Define the Scope:** Clearly define the environmental focus of the visit. Is it water quality, air pollution, waste management, or something else?
- **Research the Area:** Gather background information about the location. Are there known environmental concerns? What industries or activities are present?
- **Review of Literature related to the issue:** report and reflect on some relevant reference material available on the purpose of the field visit.
- **Identify Stakeholders:** Who manages the land or resource you'll be visiting? Are there local residents or community groups involved? Contact them beforehand if possible.
- **Prepare Data Collection Tools:** Decide on your data collection methods. Will you need tools like thermometers, pH testers, or noise meters? Prepare data collection sheets or digital forms.

Field Visit:

- **Record Observations:** Take detailed notes on your observations. Describe the physical environment, any visible signs of pollution, or human activities that might be impacting the area.
- **Data Collection:** Collect data according to your plan. Take measurements, photograph relevant features, and record any wildlife sightings.
- **Community Engagement (Optional):** If appropriate, engage with local residents or stakeholders. Ask questions about their experiences and concerns regarding the environment.

Report Writing:

- **Introduction:** Briefly explain the purpose of the field visit, the location, and the date.
- **Review of Literature:** present the review of available research studies/reports bringing out its importance, implications and relevance
- **Methodology:** Describe the methods used for observation and data collection.
- **Observations:** Present your observations in a clear and organized manner. Include pictures or diagrams if helpful.
- **Data Analysis:** Analyze and present any collected data in tables, graphs, or charts. Indicate insights and trends from the data
- **Environmental Issues:** Identify the key environmental issues based on your observations and data.
- **Conclusion:** Summarize your findings, record reflections and insights and discuss the potential implications of the identified environmental issues.

Field Visit Examples: Identifying Environmental Issues

Here are a couple of examples to illustrate the points mentioned earlier:
Example: Investigating Air Pollution in an Urban Area

Scenario: You suspect air quality is declining in your city due to increased traffic congestion and industrial activity.
Preparation:

- **Define the Scope:** Focus on potential sources like traffic and industry, and their impact on air quality.
- **Research the Area:** Investigate the types of industries operating in your city and major traffic corridors.
- **Review of Literature related to the issue:** report and reflect on some relevant reference material available on air pollution in urban area
- **Identify Stakeholders:** Contact your local environmental agency, a community group concerned about air quality, and representatives from major industries.
- **Data Collection Tools:** Data collection tools from the website show the air quality index for various pollutants like particulate matter (PM2.5 and PM10) and ozone.

Field Visit:

- **Locations:** Visit several locations with high traffic volume, near industrial facilities, and in residential areas away from major sources.
- **Observations:** Note the visibility (haze or smog), unusual odors, and any visible smoke or factory emissions. Observe traffic patterns and types of vehicles.
- **Data Collection:** The air quality monitor measures PM2.5 and ozone levels at different points. Measure noise levels at various locations.
- **Community Engagement:** Talk to residents about their experiences with air quality and any health concerns. If possible, speak with representatives from industries about their emission control practices.

Report Writing:

- **Introduction:** Explain the purpose of the visit, areas visited, and date.
- **Review of Literature:** present the review of available research studies/reports bringing out its importance, implications and relevance
- **Methodology:** Describe the methods used for observations and data collection.
- **Observations:** Describe your observations at different locations, including any interactions with stakeholders.
- **Data Analysis:** Analyze and present any collected data in tables, graphs, or charts. Indicate insights and trends from the data. Eg. . Present data on PM2.5, ozone, and noise levels in tables or graphs.
- **Environmental Issues:** Identify potential sources of air pollution based on observations, location data, and community concerns. Discuss the health impacts of PM2.5, ozone, and noise pollution.
- **Conclusion:** Summarize your findings and the potential consequences of air pollution on public health and quality of life.
- **Recommendations:** Recommend advocating for stricter emission regulations for industries and vehicles, promoting public transportation use, and planting trees to improve air quality.

  This example showcases how to conduct a field visit to investigate air pollution in an urban area. By following these steps, you can gather valuable data to understand the environmental issues and advocate for solutions that promote cleaner air.

Similar Field projects in Environment Management and Sustainable Development may be undertaken based on the local needs and availability.

Signature:
Prof. Kavita Laghate
Chairman of Board of Studies in Value Education