In Country Tour Report by

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AGR419: In Country Tour

Department of Agriculture

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Content

Agriculture Department: Country Tours Program

1.Overview:

The Agriculture Department organizes educational country tours to provide participants with hands-on experience in different cultivation processes and herbal knowledge. These tours aim to offer exciting opportunities for learning and new experiences.

Schedule: Tours begin at 17 january 5::00 PM and conclude by 24 january 12:00 AM (duration: approximately 8 days).

Return transportation is arranged via bus.

Participants: Organizing Body: The tours are managed by the Agriculture Department in collaboration with the honorable Teacher and teaching staff.

Key Attendees: Jilhus Ahmed Jewel sir,H.M Anishuzzaman.

Students: A total of 93 students have registered for the tours.

Transportation: Multiple buses are provided for travel.

Bus Facilities:

Each bus is equipped with required comfort during hot weather.

Staff onboard include a driver, supervisor, helper, and tour guide.

Additional Notes:

Participants are encouraged to bring a notebook and rosary (if needed) for documentation and reflection.

Focus areas include observing agricultural practices, understanding herbal ecosystems, and engaging with local farming communities.

2.Our First Destination: Sajek Valley

Overview of Sajek Valley tour

Location: Situated in the Rangamati district of the Chittagong Hill Tracts (CHT), near the India-Bangladesh border.

Topography: Hilly terrain with elevations ranging from 1,200 to 1,800 feet, characterized by lush forests, valleys, and slopes.

Climate: Subtropical monsoon climate with moderate temperatures (15–30°C) and heavy rainfall (June–September).

Here existing agricultural practices we are observe

1.Traditional Farming Systems

- **Jhum (Shifting Cultivation):**

☐ Indigenous communities (Chakma, Marma, Tripura) practice slash-and-burn agriculture.
☐ Crops: Rice, maize, turmeric, ginger, cotton, and vegetables (e.g., pumpkins, beans).
☐ Challenges: Soil degradation, reduced fertility after 2–3 years, deforestation.

- **Fruit Orchards**

☐ Oranges (locally called "Sajek Orange") are a signature crop, thriving in the cool climate
☐ Other fruits: Pineapples, bananas, and jackfruits.

- **Spice Cultivation:**

☐ Turmeric and ginger are grown for both local consumption and regional markets.

- **Bamboo and Agroforestry:**

☐ Bamboo is cultivated for construction, handicrafts, and soil conservation.

Mixed cropping with timber trees (e.g., teak) to stabilize slopes.

2. Challenges

Soil Erosion: Steep slopes and heavy rainfall accelerate topsoil loss.

Limited Irrigation: Reliance on rainwater due to inadequate irrigation infrastructure.

Market Access: Poor road connectivity hampers transportation of perishable goods to urban markets.

Climate Vulnerability: Erratic rainfall patterns and landslides threaten crop yields.

Land Tenure Issues: Unclear land rights discourage long-term agricultural investments.

3.Opportunities for Improvement

Sustainable Farming Techniques

- Terrace Farming: Reduce soil erosion on slopes and improve water retention.
- Organic Farming: Promote chemical-free practices to meet demand for organic produce.
- Agroforestry: Integrate fruit trees (e.g., oranges) with nitrogen-fixing plants to enhance soil health.

Infrastructure Development

- Irrigation Systems: Install small-scale water harvesting structures (e.g., check dams, ponds).
- Cold Storage: Build facilities to reduce post-harvest losses of oranges and vegetables.
- Road Upgrades: Improve connectivity to markets in Rangamati and Chittagong.

Community Empowerment

- Training Programs: Educate farmers on modern techniques (e.g., composting, pest management).
- Cooperatives: Establish farmer groups to collectively negotiate prices and access resources.

Eco-Agritourism

- Link agriculture with tourism by showcasing orange orchards, spice gardens, and traditional farming methods to visitors.

4. Recommendations

- Government/NGO Support: Fund terrace farming projects and provide subsidies for organic inputs.
- Research Initiatives: Study climate-resilient crop varieties suited to hilly ecosystems.
- Land Rights Reform: Clarify land ownership to incentivize sustainable farming investments.
- Market Linkages: Partner with e-commerce platforms to sell Sajek oranges and spices nationally.

3.Second visit was BARI Institute Khagrachari

The activities observed: The officer showed them all activities. This likely includes research fields, demonstration plots, seed production, maybe training facilities. They might have seen specific crops being tested, like maize, turmeric, ginger, or fruits. Also, techniques for soil conservation, irrigation methods suited to hilly areas, pest management practices.

All discuss with us things like limited funding, difficulties in technology transfer to local farmers, climatic challenges such as erratic rainfall, soil erosion in hilly regions. Maybe infrastructure limitations in remote areas.

The visit provided valuable insights into the agricultural landscape of Rangamati, emphasizing both progressive farming techniques and challenges that need to be addressed. The solutions presented by the Agriculture Officer, such as improved seed production, irrigation management, and pest control strategies, have the potential to significantly benefit local farmers. However, addressing financial constraints, infrastructure limitations, and climate challenges is crucial for long-term agricultural development in the region.

4.In afternoon we visit Alutila Cave

Visit to Alutila Cave – A Natural Wonder

In the afternoon, we visited Alutila Cave , a famous natural attraction located in the Khagrachari district. Surrounded by lush green hills, dense forests, and breathtaking landscapes, the cave offers an exciting adventure for visitors.

The cave, formed within a rocky hill, is about 100 meters long and has a narrow, dark passage that requires torches or bamboo flares to navigate. Inside, we experienced the cool and mysterious atmosphere, with water flowing through the cave, creating a thrilling yet mesmerizing journey.

From the hilltop near the cave, we enjoyed a stunning panoramic view of the surrounding valleys and mountains. The fresh air, serene environment, and untouched natural beauty made the visit a memorable experience, showcasing the enchanting charm of the Chittagong Hill Tracts.

5.3rd day of tour and visit Kaptai Lake


Visit Kaptai Lake on the third day of their tour. Let me start by recalling what I know about Kaptai Lake. It's the largest man-made lake in Bangladesh, created in the 1960s for hydroelectric power. Located in the Chittagong Hill Tracts near Kaptai town, it's a significant water body.

From an agricultural perspective, the lake must play a role in irrigation, fisheries, and possibly supporting surrounding farmlands.

Here we observe about Agricultural and Aquacultural Significance

A. Fisheries & Aquaculture

- Key Activity: The lake is a major hub for freshwater fish production, contributing ~13% of Bangladesh's inland fish yield.
- Common Species: Rohu, Katla, Mrigal, Tilapia, and native species like Kaptai Koi (climbing perch).
- Floating Cage Culture: Observed fish farms using cages to cultivate high-value species for commercial markets.

B. Irrigation Support

- Water Supply: The lake's water is channeled to irrigate paddy fields and vegetable farms in adjacent plains (e.g., Rangamati and Khagrachari).
- Crop Diversity: Supports rice, maize, seasonal vegetables (e.g., eggplant, okra), and tropical fruits (e.g., papaya, banana).

C. Agroforestry & Horticulture

- Hill Slopes: Terraced farming of pineapples, lemons, and betel leaf on surrounding hillsides.
- Bamboo Plantations: Cultivated along lake edges for soil stabilization and handicraft production

6.Then we visit Rangamati district sadar upazila with agriculture officer

Rangamati Sadar Upazila, located in the hill tracts of Bangladesh, is known for its diverse agricultural practices, including horticulture, jhum (shifting) cultivation, and various crop productions suited to the region's unique climate and soil conditions. Our visit, accompanied by the Agriculture Officer, provided valuable insights into the current agricultural landscape, challenges, and potential improvements.

Key Highlights of the Visit and Guidance from the Agriculture Officer:

1. Agricultural Condition in Rangamati

- The region's hilly terrain influences farming methods, making it different from plain-land agriculture.
- Farmers primarily cultivate fruits (pineapple, banana, papaya, mango), spices (turmeric, ginger), and vegetables.
- Soil erosion and water management remain critical issues affecting crop production.

2. Main Guidance from the Agriculture Officer

- Provided instructions on modern and sustainable farming techniques suitable for the hill tracts.
- Suggested methods to enhance soil fertility and prevent erosion, including agroforestry and terrace farming.
- Discussed improved irrigation techniques to counter seasonal droughts.

3. Recommendations and Strategies

- Use of High-Yield and Climate-Resilient Crops:Encouraging the cultivation of drought-resistant and high-yielding crop varieties.
- Soil Conservation Methods:Promoting contour farming and organic fertilization to maintain soil health.
- Pest and Disease Management:Introducing eco-friendly pest control methods to reduce crop loss.
- Market Access and Farmer Support: Suggesting initiatives to improve farmers' access to markets and agricultural inputs.

4. Future Initiatives and Development Plans

- Implementation of training programs for local farmers to adopt modern agricultural techniques.
- Collaboration with agricultural research centers to introduce innovative farming solutions.
- Strengthening cooperative farming models to increase productivity and sustainability.

This visit highlighted the importance of scientific approaches and government support in improving Rangamati's agricultural sector. By adopting the recommendations given by the Agriculture Officer, local farmers can enhance productivity, ensure food security, and contribute to sustainable development in the region.

7.Journey to Saint Martin's Island from Rangamati via Cox's Bazar on Kornofuli Ship

Saint Martin's Island, the only coral island in Bangladesh, is renowned for its scenic beauty, marine biodiversity, and small-scale agriculture. As part of our industrial tour, we explored the island's agricultural practices, challenges, and opportunities for sustainable development.

Agricultural Insights from Saint Martin's Island:

Land and Soil Condition:

- The island has sandy and salty soil, which limits large-scale farming.
- Coconut trees, betel nuts, and vegetables like chili and pumpkin are commonly cultivated.

Agricultural Challenges:

- Limited Freshwater Availability: Farmers rely on rainwater and a few freshwater sources, making irrigation difficult.

- Soil Salinity: High salt content affects crop yields and plant growth.
- Natural Disasters: Cyclones and rising sea levels pose threats to agricultural stability.

Sustainable Farming Recommendations:

- Implementing rainwater harvesting techniques for irrigation.
- Encouraging salt-tolerant crop varieties suitable for the island's conditions.
- Promoting organic farming to preserve soil fertility and reduce environmental impact.
- Introducing aquaponics and vertical farming as alternative methods for food production.

Marine and Coastal Agriculture Opportunities:

- Seaweed and Algae Farming: Potential for economic growth through commercial cultivation.
- Coastal Fisheries and Crab Cultivation: Expansion of sustainable fishing and aquaculture practices.
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8.Final Visit to Cox's Bazar: Exploring Marine Drive and Iconic Sea Beaches

For the final part of our journey, we visited Cox's Bazar Sea Beach, the longest natural sandy beach in the world. Our trip included a scenic drive along Marine Drive Road, offering breathtaking views of the Bay of Bengal, coastal forests, and fishing villages.

Attractions Visited:

Marine Drive Road:

- A stunning coastal highway stretching from Cox's Bazar to Teknaf, providing a mesmerizing view of the sea on one side and green hills on the other.
- We enjoyed the fresh sea breeze and picturesque landscapes along the way.

Kolatoli Beach:

- A popular tourist spot known for its lively atmosphere, beachside restaurants, and water sports activities like jet skiing and parasailing.

Sugondha Beach:

- A vibrant area with numerous local markets offering fresh seafood and souvenirs.
- A great place to relax and witness a stunning sunset over the Bay of Bengal.

Patuartek Beach:

- A quieter and less crowded beach, ideal for peaceful walks and enjoying the natural beauty.
- Surrounded by fishing boats and coastal vegetation, providing an authentic experience of the coastal lifestyle.

Other Notable Spots:

Himchari Beach: Famous for its waterfalls and hilltop viewpoints.

Inani Beach: Known for its golden sand and coral rocks, offering a serene environment away from the busy areas.
The visit to Cox's Bazar Sea Beach was a perfect way to conclude our journey, experiencing the unmatched natural beauty, cultural richness, and vibrant coastal life of Bangladesh.

9.Conclusion of the Industrial Tour

Our industrial tour provided valuable insights into the agricultural landscape, challenges, and opportunities across the regions we visited. From the hilly farming practices in Rangamati to the coastal agriculture in Saint Martin's Island, each location showcased its unique agricultural conditions and strategies for sustainable development.

Sustainable Hill Agriculture: In Rangamati, farmers rely on traditional and modern techniques to cultivate crops on hilly terrain. The guidance from the Agriculture Officer emphasized soil conservation, climate-resilient crops, and improved irrigation methods.

Coastal and Island Farming: Saint Martin's Island faces challenges such as soil salinity, freshwater scarcity, and climate vulnerability. However, potential solutions like rainwater harvesting, salt-tolerant crops, and marine-based agriculture could enhance food security.

Economic and Ecological Balance: The visit to Cox's Bazar highlighted the importance of preserving coastal ecosystems while supporting sustainable livelihoods through fisheries, crab farming, and seaweed cultivation.