7.2 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

Best Practice: II

1. *Title: Native Species Seed Ball Preparation and Dispersal*

2. *The Context that required initiation of the Practice:*

PRMS Mahavidyalaya is situated in the fringe areas of Choto Nagpur Platu. The Chota Nagpur Plateau is a storehouse of mineral resources such as mica, bauxite, copper, limestone, iron, coal, etc. Because of the reach of minerals, a lot of land is converted into degraded land due to open mining. This plateau and its fringe area are threatened by natural calamities such as drought and increased temperature, resulting in the loss of livelihoods and outmigration. This blog talks about tribal land rights and seed balls, a novel initiative adopted to restore the forest area. Adjacent Bankura district of West Bengal has been described as the "connecting link between the plains of Bengal on the east and Chota Nagpur plateau on the west.

An interactive seed ball series organised by the college introduced the students to the wonderful world of gardening through the fun activity of collecting seeds and preparing seed balls. The programme aimed at providing green education to the students, teachers, and stack holders and also encouraged them to kick off the monsoon season in an eco-friendly way. The entire activity was a huge success, as one could say. Just a small ball made of soil, manure, and some seeds is actually the promise every student will hold in his hand for a green world to come. Seed balls are an easy way to grow trees with a longer germination time span. They are inexpensive and can be easily dispersed over large areas, which are often hard to reach. Direct seeding reduces the shock of transplanting saplings and helps the young trees grow stronger roots and, hence, stronger trees.

3. *Objectives of the practice:*

1. The PRMS Mahavidyalaya is focused on helping to protect and enhance green areas in forests. This helps make sure that the forests are used in a way that doesn't harm the environment, preserves the variety of plants and animals, and keeps the natural balance between Forest Dwelling Scheduled Tribes and Other Traditional Forest Dwellers. The community is actively participating to gain

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their rights over the forest land and conserve the forest for effective use. Some broad and future objectives include:

2. Reforestation and Afforestation: Seed balls are an efficient way to reforest degraded areas, contributing to biodiversity conservation and ecosystem restoration.
3. Soil Conservation: Seed balls help prevent soil erosion by providing vegetation cover, stabilising the soil, and promoting moisture retention.
4. Biodiversity Enhancement: By dispersing a variety of native seeds in seed balls, diverse plant species can be reintroduced into an ecosystem, enhancing biodiversity.
5. Climate Change Mitigation: Planting trees through seed balls helps sequester carbon dioxide from the atmosphere, mitigating the effects of climate change.
6. Community Engagement: Seed ball planting initiatives often involve local communities, fostering a sense of ownership and responsibility towards environmental conservation.
7. Wildlife Habitat Restoration: Planting trees and other vegetation through seed balls creates habitats for various wildlife species, supporting ecosystem balance and resilience.
8. Water Conservation: Trees and other plants grown from seed balls help regulate the water cycle by capturing rainwater, reducing surface runoff, and replenishing groundwater reserves.
9. Sustainable Land Management: Seed ball planting promotes sustainable land use practices by restoring degraded land, enhancing ecosystem services, and improving the overall resilience of landscapes to environmental pressures.
10. Basic Needs: Native seed balls help to develop native tree species, which provide fuelwood, fodder, small timber, etc. for the locales.

4. *The Practice:*

In the first-year training session, topics like the need for making seed balls, how to prepare them, and how to execute the project independently were discussed. The students learned to prepare the mixture and the procedure for future use.

To restore and conserve the forests, about 5000 seed balls will be prepared and dispersed every year, containing native seeds such as Kend, Mahua, Palas, Siris, Asan, Jammun, Neem, Bel, Bahara, Hartaki, Imli, etc. Seed ball plantations can be an engaging way to educate and empower participants to contribute to environmental conservation. Here's an outline of the programme:

I. Introduction to Seed Balls: Provide an overview of what seed balls are, their history, and their benefits for the environment.
II. Importance of Reforestation: Explain the significance of reforestation in combating climate change, conserving biodiversity, and mitigating soil erosion.
III. Components of Seed Balls: Discuss the ingredients needed to make seed balls, including seeds, clay, compost, and water.
IV. Making Seed Balls: Lead a hands-on session where participants can make their own seed balls. Provide guidance on the proper mixture ratios and techniques for shaping and drying seed balls.

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V. Seed Selection: Discuss the importance of selecting native plant species and appropriate seeds for the local ecosystem. Highlight the benefits of using indigenous seeds for better adaptation, biodiversity support, and locally available.

VI. Planting Techniques: Demonstrate effective planting techniques for seed balls, including methods for dispersal and optimal planting times and locations.

VII. Maintenance and Monitoring: Explain the importance of post-planting care, such as watering and monitoring seed ball sites for germination and growth.

VIII. Community Engagement Strategies: Discuss ways to involve local communities, schools, and organisations in seed ball planting initiatives. Explore opportunities for collaboration and outreach.

Different Native Seeds

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Seed extraction from fruit/ pod

Seed extraction from fruit/ pod

FYM

Mixing FYM and Clay Soil

Mud Preparation

Seed Ball Preparation

Seed Ball Preparation

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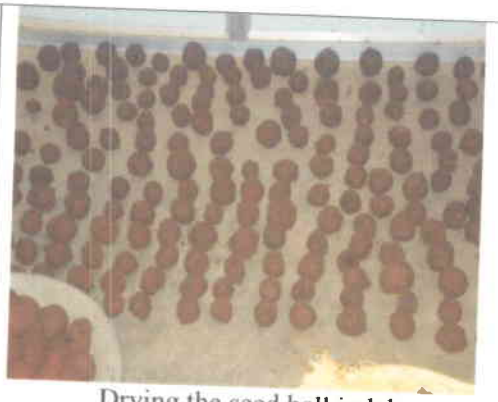
Seed Ball Preparation



Drying the seed ball in lab

Placed in a container

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Carrying the seed ball in cycle

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Dispersion the Dry Seed Ball in Degraded land

Germinate the seed ball

Impact of best practices:

This practice, degraded soil and places used for rock mining, seed ball plants can have a number of beneficial effects. These seed balls' primary goal is to boost plant diversity and rejuvenate native tree species, both of which can aid in the sustainability of the ecosystem. Following plant growth, it can give local species a place to live and food supplies, assisting in the preservation of biodiversity. Because mining operations disturb these places, it can aid in soil stabilization and erosion control, two problems that frequently arise there. Additionally, by reviving vegetation cover and enhancing the aesthetics of the landscape, the plants can aid in reclamation efforts.

List of species used during seed ball preparation

Sl. No	Botanical Name	Common Name	Family
1.	*Abroma augustum*	Ulat Kamble	Malvaceae
2.	*Albizia lebbeck*	Seris	Fabaceae
3.	*Anacardium occidentale*	Kaju	Anacardiaceae
4.	*Butea monosperma*	Palas	Fabaceae
5.	*Caesalpinia pulcherrima*	Radhachura	Fabaceae
6.	*Delonix regia*	Krishnachura	Fabaceae
7.	*Gmelina arborea*	Gamhar	Verbenaceae
8.	*Mimusops elengi*	Bakul	Sapotaceae
9.	*Pongamia pinnata*	Karanj	Fabaceae
10.	*Pterocarpus marsupium*	Piyasal	Fabaceae
11.	*Sapindus mukorossi*	Reetha	Sapindaceae
12.	*Terminalia bellirica*	Bahera	Combretaceae
13.	*Terminalia chebula*	Haritaki	Combretaceae