Best Practices:

1. Title of the Practice: Online ISRO Courses

2. Objectives of the Practice:

1. These courses aim to provide participants with the opportunity to enhance their knowledge and skills in various areas through convenient online learning methods.
2. The goal is to establish a platform focused on ISRO-based courses that delve into environmental issues. These courses would explore the intersection between space research and environmental concerns, offering participants unique insights and perspectives.
3. By shifting to online learning, individuals can continue their education and access valuable resources while maintaining safety and adhering to social distancing guidelines.
4. To offer an open and accessible learning opportunity to participants through an online platform. This approach ensures that individuals from diverse backgrounds and geographical locations can engage in learning activities at their own pace and convenience, fostering a culture of lifelong learning and knowledge sharing.

3. The Context:

Considering the significance of online platforms and the need for accessible education remain. By collaborating with ISRO, we aim to provide students and teachers with an open and online learning platform that promotes continuous learning and encourages exploration of environmental and geological topics.

ISRO offers a range of courses that cover various aspects of the environment and geology, making it an ideal partner for this initiative. The curriculum of these courses is carefully designed to incorporate co-curricular, extracurricular, and transdisciplinary approaches. This holistic approach ensures that students not only gain subject-specific knowledge but also develop skills beyond the classroom, fostering a well-rounded educational experience. All the courses are successfully run by the institute during pandemic situation too and this is appreciated by ISRO.

4. The Practice

In the realm of higher education in India, we implemented a unique and pioneering practice by offering a diverse range of courses through the Indian Space Research Organization (ISRO). These courses covered a wide array of subjects, including space science, geology, geography, remote sensing, and geoinformatics. In total, 19 courses were carefully selected to cater to the diverse interests and needs of the participants.

The practice we adopted stands out in the context of higher education in India due to several key aspects. Firstly, the collaboration with ISRO, a prestigious and globally recognized organization, added immense value and credibility to the courses offered. ISRO's expertise in space research and technology provided a strong foundation for the curriculum, ensuring that participants received cutting-edge knowledge and insights.

The uniqueness of this practice lies in its interdisciplinary approach, bridging the gap between different academic domains. By integrating space science, geology, geography, and remote sensing, participants were exposed to a comprehensive understanding of the subject matter. This transdisciplinary approach allowed students to explore connections between seemingly distinct fields and develop a holistic perspective. Moreover, the incorporation of geoinformatics in the courses further enriched the learning experience. Geoinformatics, the science of acquiring, analyzing, and interpreting spatial data, is an emerging field with significant applications in various sectors. By including geoinformatics in the curriculum, participants gained practical skills and knowledge relevant to contemporary challenges in areas such as urban planning, disaster management, and environmental conservation.

The practice also showcased a forward-thinking approach by leveraging online platforms for course delivery. Through online learning, participants had the flexibility to access the courses from anywhere, breaking geographical barriers and expanding educational opportunities. This mode of delivery proved particularly valuable during the pandemic when traditional classroom-based teaching faced significant disruptions. The selection of 19 courses allowed participants to choose subjects that aligned with their specific interests and career goals. This personalized approach catered to the diverse needs of learners, enabling them to tailor their educational journey according to their preferences. By offering a wide range of courses, the practice fostered inclusivity and accommodated

learners from different academic backgrounds. This practice of offering ISRO-based courses in space science, geology, geography, remote sensing, and geoinformatics introduced a novel and distinctive dimension to higher education in India. The collaboration with ISRO, the interdisciplinary curriculum, the integration of geoinformatics, and the utilization of online platforms showcased the progressive and forward-looking nature of this practice. By providing participants with unique learning opportunities and cutting-edge knowledge, this practice contributed to the holistic development of students and the advancement of India's higher education landscape.

5. Evidence of Success :

The initiative to offer 13 courses through ISRO attracted significant participation from students and teachers across the country. In total, 142 individuals enrolled in these courses, representing a diverse range of backgrounds and interests. This wide participation demonstrates the broad appeal and relevance of the courses offered.

One of the key strengths of this initiative was its inclusivity. The courses were open to participants from all over the country, allowing individuals from various states, cities, and educational institutions to access the learning opportunities. This openness ensured that students and teachers, regardless of their geographical location, could benefit from the expertise and resources offered through the ISRO courses.

The geographical diversity of the participants also underlines the national reach and impact of this initiative. It brought together individuals from different regions, fostering a sense of unity and collaboration among participants from diverse cultural, linguistic, and socio-economic backgrounds. The collective engagement of students and teachers from across the country contributed to the building of a stronger and more interconnected academic community.

6. Problems Encountered and Resources Required

Publicity and popularity of the courses as the Information of the courses were available on website of ISRO and institute. There is no need of the additional infrastructure.

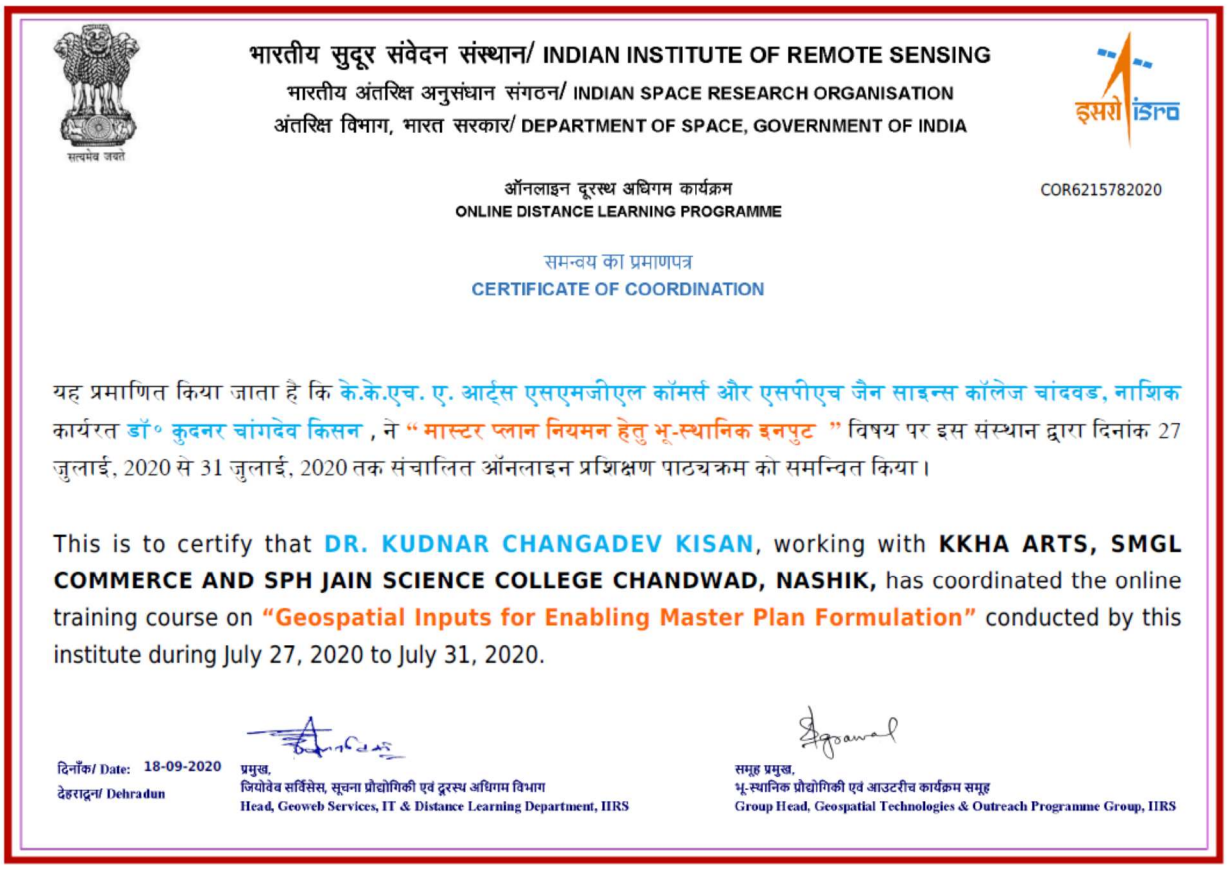
7. Notes (Benefits)

The online education platform created a need for diverse inputs related to the curriculum. In response to this demand, activities such as the one being discussed have emerged, aiming to fulfill the educational requirements of both students and teachers. By offering a range of courses and resources tailored to the interests of participants, these activities effectively address the specific needs and preferences of individuals engaged in online learning. Students seeking to expand their knowledge and skills, as well as teachers looking to enhance their expertise, can find valuable opportunities within these initiatives. Such activities play a crucial role in bridging the gap between traditional classroom-based education and the virtual learning environment. They provide a platform for students and teachers to access relevant and up-to-date educational content, ensuring that the online curriculum remains comprehensive and engaging.

Table: 1 . List of the courses and number of beneficiary

	Nodal Center Name :KKHA ARTS SMGL COMMERCE AND SPH JAIN SCIENCE COLLEGE CHANDWAD **Coordinator Name: Dr.Kudnar C,K**				
Sr.No	**Course Name**	**Date**	**Beneficiary**	**Remarks**	Organized by
1.	**2021 -2022**				
2.	83 Geospatial Technology for Hydrological Modelling	19 to 30 July 2021	06	Coordinator	
3.	84 Geospatial Modelling for watershed Management	2 to 6 August 2021	04	Coordinator	
4.	85 Basic of RS GIS and GNSS	16 August to 16 November 2021	27	Coordinator	
5.	87 Global Navigation Satellite System	13 to 24 September 2021	01	Coordinator	

6.	90 Remote sensing & GIS Application in Natural Resource management	8 to 26 November 2021	07	Coordinator	
7.	93 Geoinformatics for Bio diversity Conservation Planning	6 to 17 December 2021	33	Coordinator	
8.	1021 Status , Challenge and opportunities for Geospatial Technology Application in Irrigation water Management	17 May 2022	11	Coordinator	
9.	1019 Geospatial Modelling Driven Urban Hazard and Risk Analysis	21 December 2021	04	Coordinator	
10.	94 Overview of Geoprocessing using Python	17 ton28 January 2022	35	Coordinator	
11.	95 Global Navigation Satellite System & Location Based Services	21 to February to 4 March 2022	15	Coordinator	
12.	96 Hyperspectral and microwave Remote sensing Techniques for Geological studies	7 to 17 March 2022	01	Coordinator	
13.	97 Advanced Geospatial Technology for Disaster Risk Reduction DRR	18 April to 29 April 2022	08	Coordinator	



भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA

सत्यमेव जयते

इसरो ISRO

ऑनलाइन दूरस्थ अधिगम कार्यक्रम
ONLINE DISTANCE LEARNING PROGRAMME

COR6215782020

समन्वय का प्रमाणपत्र
CERTIFICATE OF COORDINATION

यह प्रमाणित किया जाता है कि के.के.एच. ए. आर्ट्स एसएमजीएल कॉमर्स और एसपीएच जैन साइन्स कॉलेज चांदवड, नाशिक कार्यरत डॉ॰ कुदनर चांगदेव किसन , ने " मास्टर प्लान नियमन हेतु भू-स्थानिक इनपुट " विषय पर इस संस्थान द्वारा दिनांक 27 जुलाई, 2020 से 31 जुलाई, 2020 तक संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम को समन्वित किया।

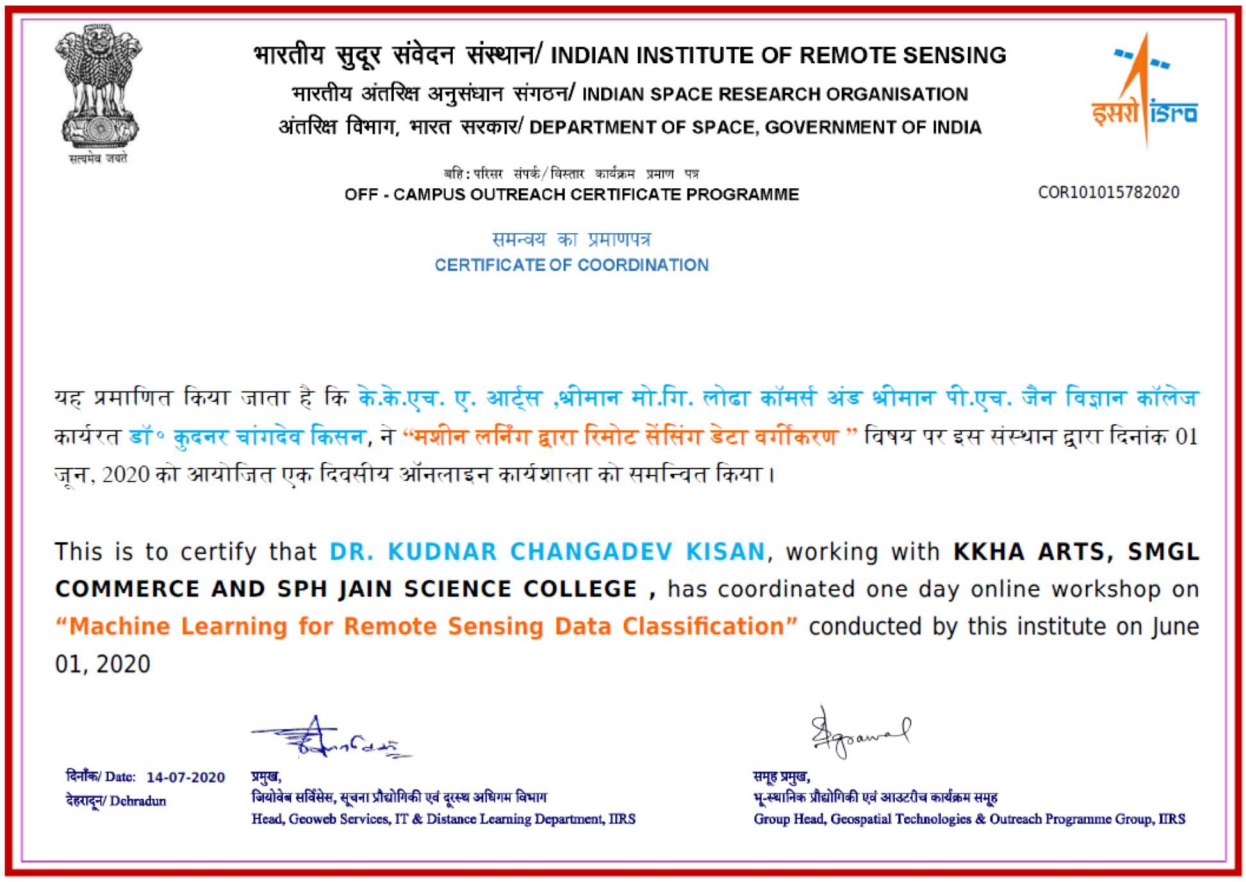
This is to certify that **DR. KUDNAR CHANGADEV KISAN**, working with **KKHA ARTS, SMGL COMMERCE AND SPH JAIN SCIENCE COLLEGE CHANDWAD, NASHIK,** has coordinated the online training course on **"Geospatial Inputs for Enabling Master Plan Formulation"** conducted by this institute during July 27, 2020 to July 31, 2020.

दिनाँक/ Date: 18-09-2020
देहरादून/ Dehradun

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Head, Geoweb Services, IT & Distance Learning Department, IIRS

समूह प्रमुख,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

Figure 1. Appointment certificate of the Coordinator



भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA

सत्यमेव जयते

बहि: परिसर संपर्क/विस्तार कार्यक्रम प्रमाण पत्र
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

COR101015782020

समन्वय का प्रमाणपत्र
CERTIFICATE OF COORDINATION

यह प्रमाणित किया जाता है कि के.के.एच. ए. आर्ट्स ,श्रीमान मो.गि. लोढा कॉमर्स अंड श्रीमान पी.एच. जैन विज्ञान कॉलेज कार्यरत डॉ॰ कुदनर चांगदेव किसन, ने "मशीन लर्निंग द्वारा रिमोट सेंसिंग डेटा वर्गीकरण " विषय पर इस संस्थान द्वारा दिनांक 01 जून, 2020 को आयोजित एक दिवसीय ऑनलाइन कार्यशाला को समन्वित किया।

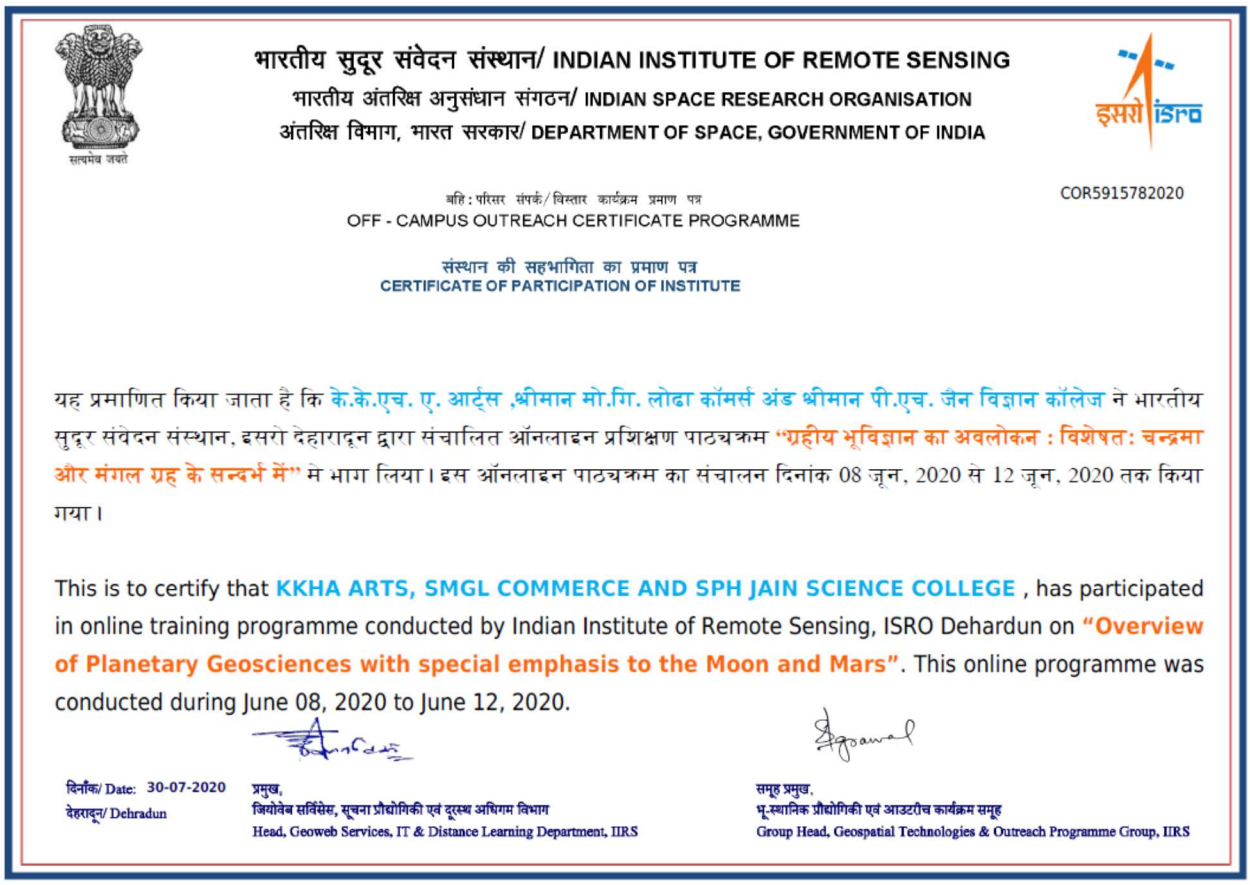
This is to certify that **DR. KUDNAR CHANGADEV KISAN**, working with **KKHA ARTS, SMGL COMMERCE AND SPH JAIN SCIENCE COLLEGE ,** has coordinated one day online workshop on **"Machine Learning for Remote Sensing Data Classification"** conducted by this institute on June 01, 2020

दिनाँक/ Date: 14-07-2020
देहरादून/ Dehradun

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Head, Geoweb Services, IT & Distance Learning Department, IIRS

समूह प्रमुख,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

Figure 2. Certificate of the Appointment of Coordinator



भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA

सत्यमेव जयते

इसरो ISRO

बहि : परिसर संपर्क / विस्तार कार्यक्रम प्रमाण पत्र
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

COR5915782020

संस्थान की सहभागिता का प्रमाण पत्र
CERTIFICATE OF PARTICIPATION OF INSTITUTE

यह प्रमाणित किया जाता है कि के.के.एच. ए. आर्ट्स ,श्रीमान मो.गि. लोढा कॉमर्स अंड श्रीमान पी.एच. जैन विज्ञान कॉलेज ने भारतीय सुदूर संवेदन संस्थान, इसरो देहारादून द्वारा संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम "ग्रहीय भूविज्ञान का अवलोकन : विशेषत: चन्द्रमा और मंगल ग्रह के सन्दर्भ में" मे भाग लिया। इस ऑनलाइन पाठ्यक्रम का संचालन दिनांक 08 जून, 2020 से 12 जून, 2020 तक किया गया।

This is to certify that KKHA ARTS, SMGL COMMERCE AND SPH JAIN SCIENCE COLLEGE , has participated in online training programme conducted by Indian Institute of Remote Sensing, ISRO Dehardun on "Overview of Planetary Geosciences with special emphasis to the Moon and Mars". This online programme was conducted during June 08, 2020 to June 12, 2020.

दिनांक/ Date: 30-07-2020
देहारादून/ Dehradun

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Head, Geoweb Services, IT & Distance Learning Department, IIRS

समूह प्रमुख,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

Figure 3. Institutional Letter for the course

Best Practice-II

1. Title of the Practice: Wild Vegetable Festival

2. Objectives of the Practice:

1. To inculcate awareness about the importance of wild vegetables in terms of nutrition, biodiversity conservation, and cultural heritage.
2. Encouraging consumption of wild vegetables by showcasing their culinary diversity, nutritional value, and unique flavors.
3. Preserving traditional knowledge related to the identification, cultivation, and utilization of wild vegetables. Through workshops, demonstrations, and interactive sessions, students and society members can learn from experienced practitioners and keep traditional knowledge alive.
4. To highlight the importance of conserving wild vegetable species and their habitats.
5. To promote cultural diversity and dialogue between students and society.

3. The Context:

Figure 4 Advertisement of the event

Organizing a Wild Vegetable Festival in college provides a unique opportunity to engage students, faculty, and the local community in a meaningful and educational

event. The festival serves as a platform to promote awareness and appreciation for the rich diversity of wild vegetables, their nutritional value, and their cultural significance. By organizing a Wild Vegetable Festival in college, students gain practical knowledge, cultural appreciation, and a sense of responsibility towards sustainable food systems. The festival will play vital role for learning, collaboration, and community engagement, creating a positive impact both within the college and in the broader society.

4. The Practice:

The college is located in Hilly area in the lap of mountains of satmala ranges. Most of the students are tribal and are considered to be source of ethnic knowledge. The hilly area is the gift of rich biodiversity. Hence students are collecting the edible plant species from mountain and prepares various recipes. By organizing a Wild Vegetable Festival in college, the practice not only raises awareness about the importance of wild vegetables but also encourages sustainable food practices, cultural appreciation, and community engagement. It provides a platform for learning, sharing knowledge, and celebrating the rich diversity of wild vegetables while promoting their inclusion in daily diets for improved nutrition and environmental sustainability. The practice of organizing a Wild Vegetable Festival in college involves creating an event that celebrates the diversity, nutritional value, and cultural significance of wild vegetables. This practice aims to engage students, faculty, and the local community in an immersive and educational experience.

1. Wild vegetable identification and documentation: Students and experts teachers from department of Botany identify and document various species of wild vegetables brought by students.
2. Exhibitions and displays: The festival typically features exhibitions and displays that the different types of wild vegetables. These displays may include live specimens, photographs, charts, and informational posters that provide details about the botanical properties, traditional uses, and health benefits of each vegetable. This allows participants to learn about the variety and significance of wild vegetables.

3. Culinary demonstrations and tastings: One of the highlights of the festival is the culinary aspect. Chefs, local cooks, or culinary experts conduct cooking demonstrations where they prepare dishes using wild vegetables. Participants have the opportunity to taste these dishes and learn about the unique flavors and textures that wild vegetables offer. Recipe contests or workshops may also be organized to encourage participants to explore cooking with wild vegetables at home.
4. Workshops and seminars: The festival also include workshops and seminars conducted by experts in the field of botany, nutrition, or sustainable agriculture.
5. Community engagement and outreach: Inviting farmers, indigenous communities, or local organizations involved in wild vegetable cultivation and preservation can foster knowledge-sharing, promote sustainable practices, and create networking opportunities.

5. **Evidence of Success:**

During the Wild Vegetable Festival, the students prepared a total of 38 recipes using various wild vegetables. 76 students were showed interest in the preparation of the various recopies. These recipes included juices, milkshakes, curries, roti, pickles, chutneys, jiggery tea etc. The festival also featured a display of 16 plants, with detailed information provided about each plant, including the parts used, nutritional content, and the recipes that were prepared using them. One interesting aspect of the festival was the discovery that certain plants could be used to prepare multiple items. This showcased the versatility of these wild vegetables and highlighted the creative possibilities in utilizing a single plant to create a variety of dishes. This not only increased the culinary options but also emphasized the sustainable use of wild vegetables. By offering a diverse range of recipes and providing comprehensive information about the plants, the Wild Vegetable Festival allowed participants to explore new flavors, learn about the nutritional benefits of wild vegetables, and appreciate the abundance of culinary opportunities they offer.

6. Problems Encountered and Resources Required:

When organizing a Wild Vegetable Festival, several challenges can arise, and specific resources are required for its success. These challenges include a lack of

Figure 5. The festival

awareness about wild vegetables among participants, limited availability of certain species, the need for safety and hygiene measures, and obtaining necessary permits

Figure 6. The Exhibition

and permissions. To overcome these challenges, resources such as expertise and knowledge from experts in botany, agriculture, and nutrition are essential.

Additionally, a knowledge and culinary expertise, wild vegetable identification resources, culinary equipment and ingredients, promotional materials, partnerships with local farmers and organizations, and funding or sponsorship are needed. By addressing these challenges and utilizing the necessary resources, a Wild Vegetable Festival can effectively promote awareness, education, and appreciation of wild vegetables among participants and the broader community.

7. Notes:

The Wild Vegetable Festival practice serves as a significant initiative for the college, benefiting both the college community and the wider society. This practice holds great importance due to its multiple advantages and impacts. Firstly, the practice benefits the college students by providing them with hands-on experience and knowledge about wild vegetables. Through their participation in the festival, students have the opportunity to explore and appreciate the culinary and nutritional aspects of wild vegetables. This enhances their understanding of local biodiversity, traditional food practices, and sustainable agriculture. Moreover, the practice extends its benefits to the society at large. By showcasing the nutritional value and culinary potential of wild vegetables, the festival promotes healthier eating habits and encourages individuals to incorporate these nutritious plants into their diets. This can have a positive impact on public health and wellbeing.