



Ministry of Forests and Environment, Government of Nepal

Customized weather and climate information system for climate-resilient agriculture in Nepal

Contract No.: UNEP/2022/339 (Umoja # 4700023937)

Output-5: Report on Test the Designed API and Identified Communication Mechanisms Including Mobile- and Internet- Based SMS Technologies in the Selected Community



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List of Acronyms

AICC	Agriculture Information and Communication Centre
API	Application Programming Interface
CHIRPS	Climate Hazards Group InfraRed Precipitation with Station
DHM	Department of Hydrology and Meteorology
ECMWF	European Centre for Medium-Range Weather Forecasts
GDP	Gross Domestic Product
GLOF	Glacial Lake Outburst Flood
ICT	Information and Communications Technology
ICWFDS	ICT-based Customized 3 Days Weather Forecast Dissemination System
INDC	Intended Nationally Determined Contributions
IST	Indian Standard Time
MoAD	Ministry of Agriculture and Livestock Development
MoFE	Ministry of Forest and Environment
MoSTE	Ministry of Science, Technology and Environment
MSTE	Ministry of Science, Technology and Environment
NPT	Nepal Time
UNDRR	United Nations Office for Disaster Risk Reduction
USAID	United States Agency for International Development
USD	United States Dollar

1 Introduction

Nepal has been ranked as the 9th most affected country towards climate change (Eckstein et al., 2018¹) but is one of the least contributors to the emissions of greenhouse gases (0.11% of global share). Nepal was identified as one of the four global hotspots for climate change risk and impact of climate change is seen in various sectors like biodiversity, agriculture, livestock, water sources, soil, tourism, health, etc (MoSTE, 2014²). According to DHM (2015), during the last four to five decades, the rate of increase in annual maximum temperature (0.04 °C yr⁻¹) over the country was significantly higher than the rate of increase in minimum temperature (0.01 °C yr⁻¹). The occurrence of cold days and nights has decreased significantly during the last few decades (World Bank 2020³).

Temperature is projected to increase in the future climates under both low and high emissions scenarios and in the medium (0.92–1.07°C) and long-term (1.72–1.82°C) (MoFE 2019⁴). This increase in temperature is likely to be more visible during the dry months (December–May) (World Bank 2020). An increase in the number of ‘hot’ days will be 19–27 days by 2045 and 26–43 days by 2065 (MoFE 2019). The High Mountains are likely to experience the greatest warming of all the regions, and the west is likely to warm more than the eastern regions (MoFE 2019).

The annual rainfall has significantly decreased at the rate of 3.7 mm (-3.2%) per month per decade and under various climate change scenarios n is projected to reduce in a range of 10 to 20% across the country by the end of this century (INDC of Nepal, 2016⁵).

In the future climates, rainfall is likely to be more erratic, though it is likely that it will increase in the future climate throughout the country especially in the central and western regions. Winters are projected to be drier, whilst summers along with the monsoon are likely to be wetter in the future climate scenarios (MoFE 2019). Overall, Nepal is one of the most vulnerable countries to climate change, water-induced disasters and hydro-meteorological extreme events such as droughts, storms, floods, inundation, landslides, debris flow, soil erosion and avalanches. Summer monsoon rains may increase threefold, resulting in more frequent summer flooding (World Bank 2020). The number of wet and extremely wet days will not only increase the likelihood of flash flooding, but also other water-induced hazards like landslides and soil erosion (MoFE 2019).

Although lots of data and information are available at various agencies in Nepal (e.g., agricultural research institutes, meteorological monitoring stations, agricultural advisory agencies, etc.) but this country lacks a formal system that integrates data from different sources and translate raw information into accessible forms that are understandable and relevant to decision-making. Hence, there is need to engage all the

¹ Eckstein, D., Hutfils, M.-L., and Winges, M. (2018). Global Climate Risk Index 2019: Who Suffers Most From Extreme Weather Events? Weather-related Loss Events in 2017 and 1998 to 2017. Berlin: Germanwatch Nord-Süd Initiative eV.

² MoSTE. (2014). Second national communication report to UNFCCC. <http://unfccc.int/resource/docs/natc/nplnc2.pdf>

³ World Bank (2020) Climate Change Knowledge Portal. <https://climateknowledgeportal.worldbank.org>.

⁴ MoFE (2019) Climate change scenarios for Nepal for National Adaptation Plan (NAP). Kathmandu: Ministry of Forests and Environment (MoFE).

⁵ INDC of Nepal (2016). https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Nepal/1/Nepal_INDC_08_Feb_2016.pdf

relevant actors so that a better understanding of the sensitivity of farming practices can be developed and more relevant information can be produced.

In the light of this, an application programming interface (API) has been developed for the automatic dissemination of location-specific customized 3-days weather forecast to farmers. It has been named as ICT-based Customized 3 Days Weather Forecast Dissemination System (ICWFDS). It has been developed in a user-friendly language and tested in selected locations and communities in Nepal. The details of these locations are furnished in Table 1 and their spatial distribution within the country is portrayed in Figure 1.

Table 1: Details of the location selected for the testing of API in Nepal

Location	District	Region
Malangawa	Sarlahi	Tarai Plain
Rainas Municipality	Lamjung	Middle Mountain
Bhojpur	Bhojpur	Middle Mountain

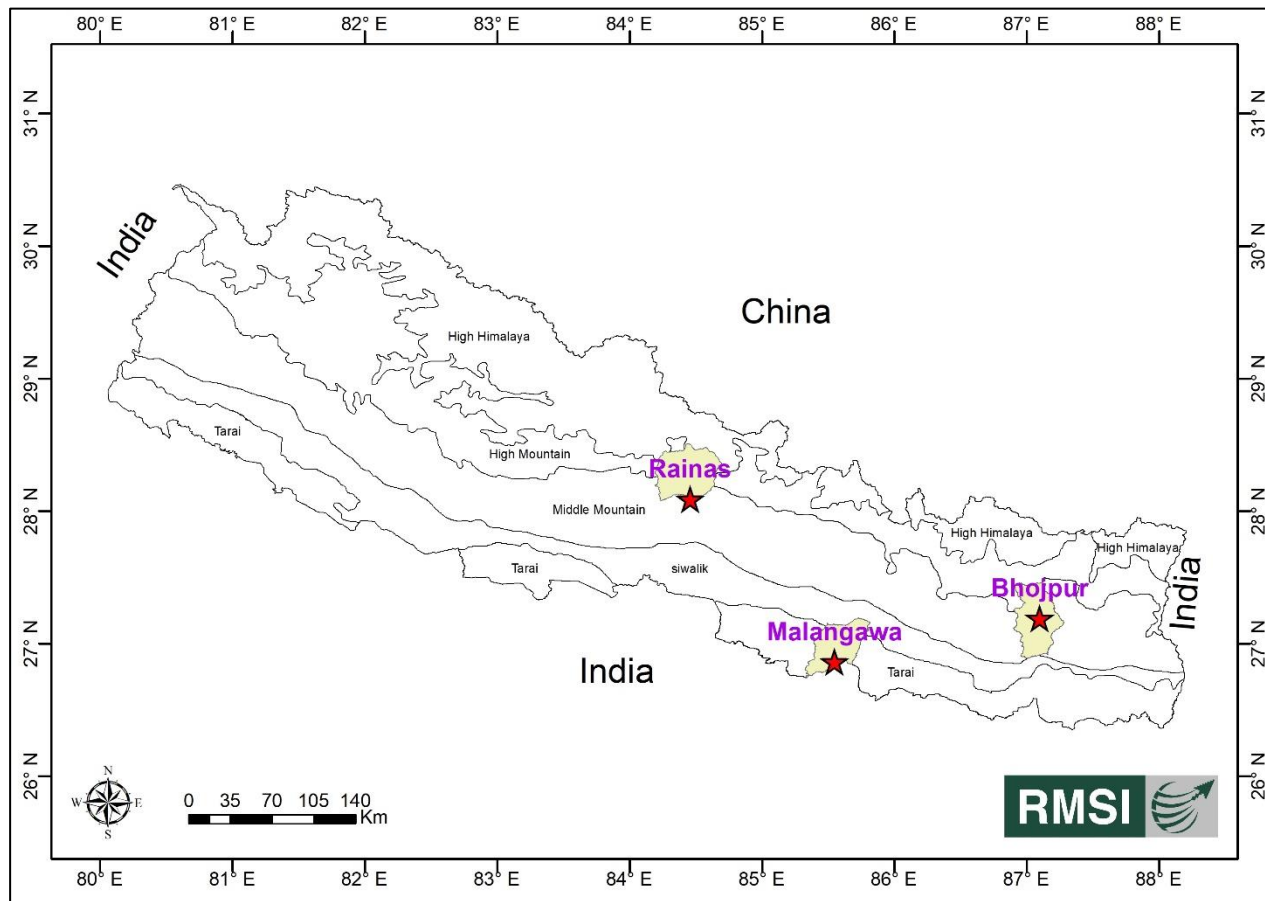


Figure 1: Spatial distribution of the locations selected for the testing of API in Nepal

1.1 The team of experts

The RMSI team of experts composed with the following members.

1. Dr. Sandeep VM – Climate Change, Agrometeorology and IT expert
2. Mr. Shivang Bhatnagar – Full stack developer and IT expert
3. Dr. Sujata Tamang - Gender Expert (National Expert-1)
4. Dr. Rajendra Uprety - Agricultural Engineer / Agro-meteorology Expert / Meteorologist (National Expert-2).

2 Day-1 (02nd December 2023)

The first two members of the RMSI team departed from New Delhi at 07.45 AM (IST) and arrived Kathmandu at 10.00 AM (NPT) on 02nd December 2023 by Air Vistara UK-157. After the clearance procedures at Kathmandu Airport, they departed to Malanwa in Sarlahi district which was the first location for the workshop and API testing. This location is situated in southern parts of the country and representing Tarai plains of Nepal. The team started from Kathmandu by 12.00 PM (NPT) by road and reached Lalbandi in Sarlahi district by 11.45 PM (NPT) and stayed at Hotel United Inn, Lalbandi.

3 Day-2 (3rd December 2023)

The team reached Hotel Sujata Palace situated at Malangwa, Sarlahi district by 09.00 AM (NPT) which was the venue of the workshop and testing the API. The national expert Dr. Rajendra Uprety joined with the RMSI team and together they made the initial arrangements for the workshop and API testing. By 10.00 AM (NPT) all the invited participants have arrived at the venue. The total number of participants was 29 which is found to be a good representation of local farming community and government officials. The details of the participants are furnished in section 9.1 of Annexure-1.

The registration processes were completed by 10.30 AM and the meeting started with the self-introduction by the participants. It is followed by the brief introduction and purpose of this workshop by Dr. Rajendra Uprety, the national expert of this present assignment.

Thereafter, Dr. Sandeep VM, the team member of RMSI, explained the major objectives of this present assignment and the importance of the API for the dissemination of advisories based on three-day weather forecast. He explained the weather and climatic features of Nepal and the past and future climate scenarios of the country. He briefed the impact of climate change and weather aberrations on different sectors in Nepal. He also explained the weather observation system and its importance in Nepal. He briefed different types of weather forecasting services and their significance and applications. Then he explained about the Department of Hydrology and Meteorology (DHM), which is the agency providing weather related services in the country and its various types of services and their uses in different sectors. Finally, he briefed the importance of the API which has been developed as part of this assignment and its usage in disseminating the advisories based on three days weather forecast in Nepal. He also explained the past experience and success stories of RMSI in developing similar kind of applications over various countries in Asia and Africa such as Myanmar, Kenya, Ethiopia, etc.

He handed over the baton to Mr. Shivang Bhatnagar who is the key developer of the API named ICT-based Customized 3 Days Weather Forecast Dissemination System (ICWFDS). He started with the major features of ICWFDS. He explained about all the pages and features of the API and their details are furnished below.

3.1 Home Page

The home page of API which has been named as ICT-based Customized 3 Days Weather Forecast Dissemination System (ICWFDS) is displayed in Figure 2. The topmost row of the home page contains the contact details and the links to admin login, farmer registration, weather report and language selection. It should be noted that the API is available in three different languages viz., English, Hindi, and Nepali. The panel placed just below the first row contains the links to all the major applications of the ICWFDS. An introduction about ICWFDS has been made available just below the main panel in the home page (Figure 3).



Figure 2: Home page of API (i.e., ICWFDS)

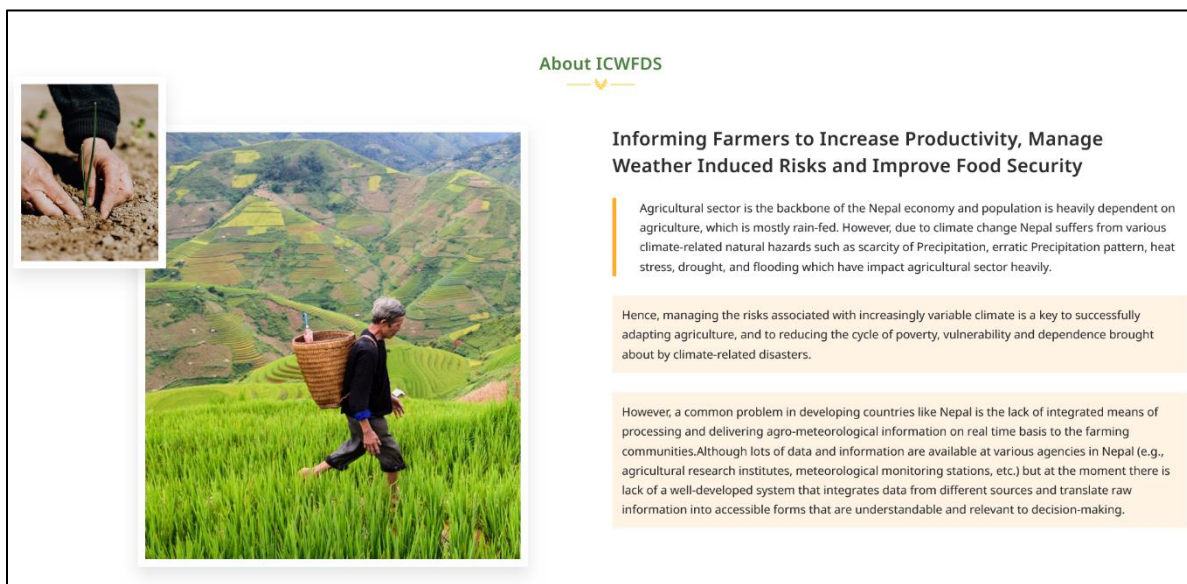


Figure 3: Brief introduction on ICWFDS

The main panel in the homepage of the ICWFDS contains the links to all its major applications. The page for climatology will provide the district wise daily climatology for rainfall and phenological stage wise average maximum temperature and minimum temperature. The user can select the desired province and district from the respective drop-down menus. The drop-down menu “Select Season” allow the user to select three seasons viz., Summer, Winter and Spring seasons. Finally, the user can select the crop from the dedicated drop-down menu placed near to the “Search” button. The user can select rice and maize crops for summer season, wheat and potato crops from winter season and maize crop for spring season from this menu. After selecting the province, district, season and crops, the user may click on “search” button and an interactive map of the respective daily climatology for rainfall and pheno-phase wise maximum and minimum temperatures will be displayed in the panel as shown in Figure 4.

The daily climatology of rainfall has been prepared from bias-corrected Climate Hazards Group InfraRed Precipitation with Station (CHIRPS) data, which is a gridded data product with 0.05°*0.05° spatial duration. This data spanning between 50°N to 50°S and the data is available from 1981 to till date. For the present assignment, we downloaded the CHIRPS rainfall data during the past 30 years (1993-2022). The maximum temperature and minimum temperature data have been sourced from European Centre for Medium-Range Weather Forecasts (ECMWF) ERA5 data set in 0.25°*0.25° spatial resolution for the aforementioned period. The district wise daily rainfall and temperature data has been prepared using Thiessen Polygon method. After that, this daily dataset has been bias-corrected using linear scaling method with respect to the observed weather data. Thereafter, the daily climatology has been prepared and used to prepare graph presented in Figure 4.

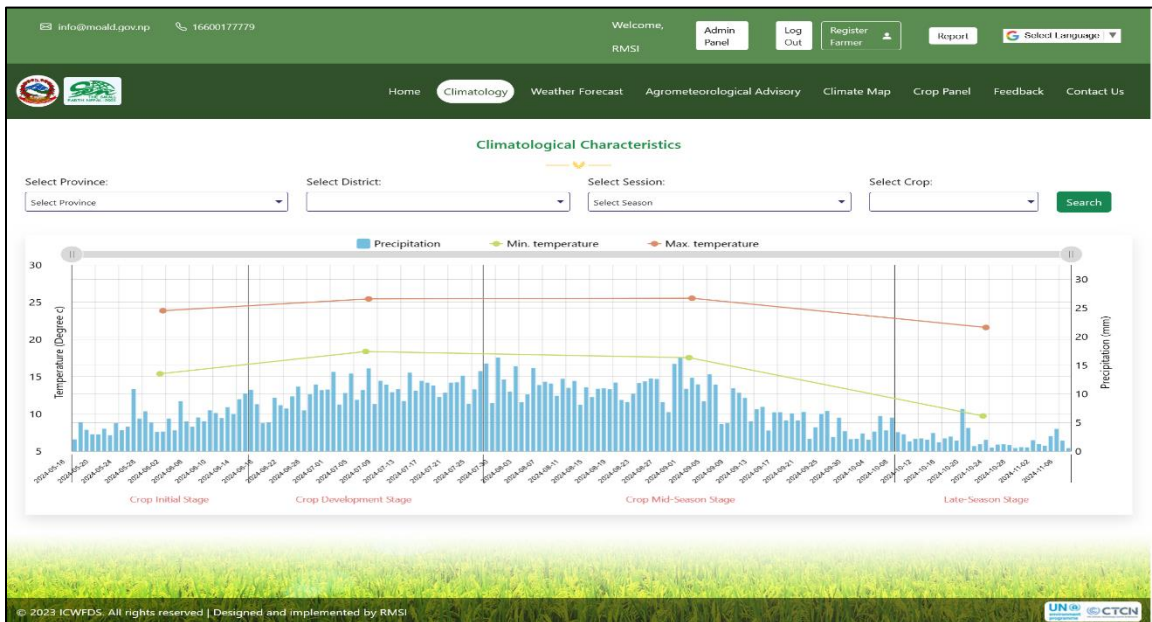


Figure 4: Daily climatology of rainfall and temperature

3.2 Weather forecast

The link to access the weather forecast has been placed on the immediate right-hand side of the climatology tab. It will provide the visualization of 3-days, 7-days, and seasonal forecasts for all the districts in Nepal. The visualization of 3-days weather forecast has been displayed in Figure 5. The interactive map will provide the day-1, day-2, and day-3 forecast for precipitation, maximum temperature, minimum temperature, relative humidity, and wind speed. The user can also click on a desired district in the map and the value of the forecast will be displayed for the selected district.

The visualization of 7-days weather forecast has been displayed in Figure 6. The interactive map will provide the 7-days forecast for precipitation, maximum temperature, minimum temperature, and relative humidity. The user can also click on a desired district in the map and the value of the forecast will be displayed for the selected district.

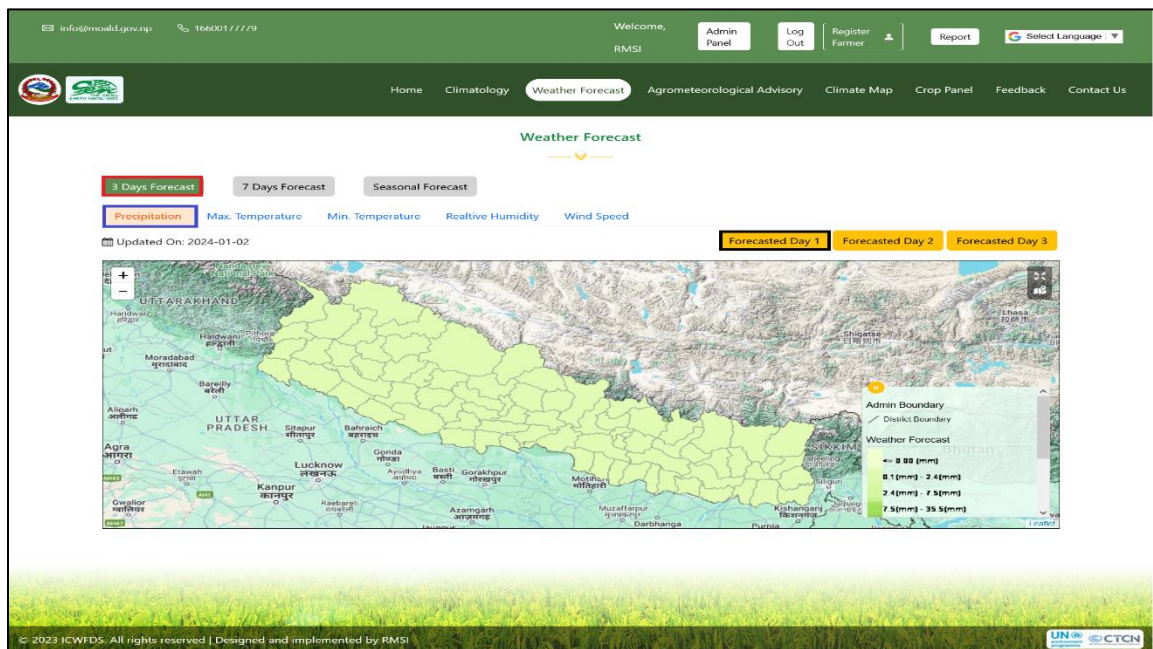


Figure 5: Web page to select 3-day weather forecast

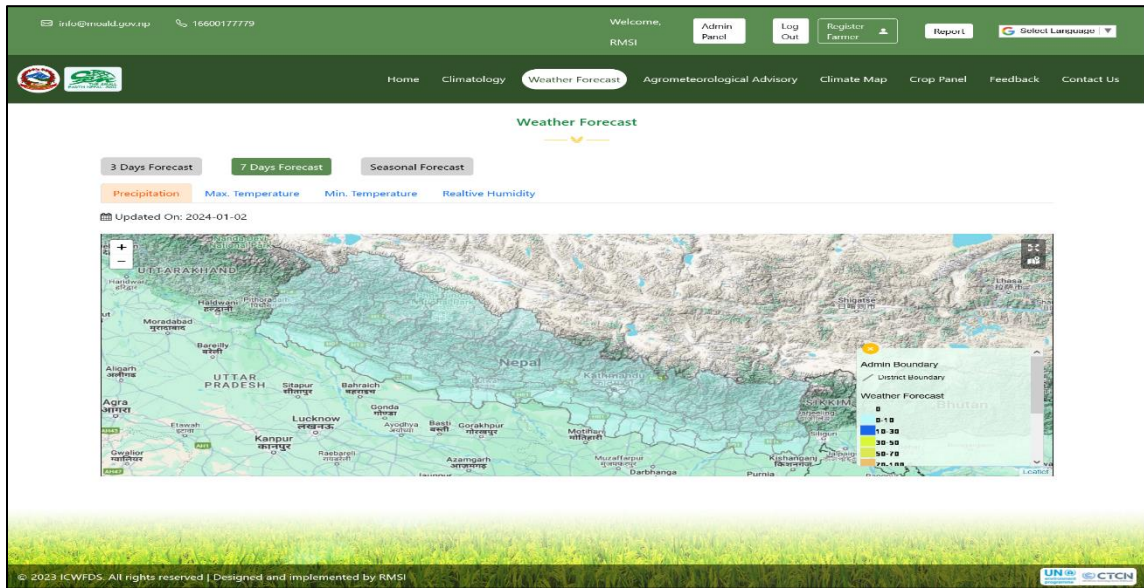


Figure 6: Web page to select 7-day weather forecast

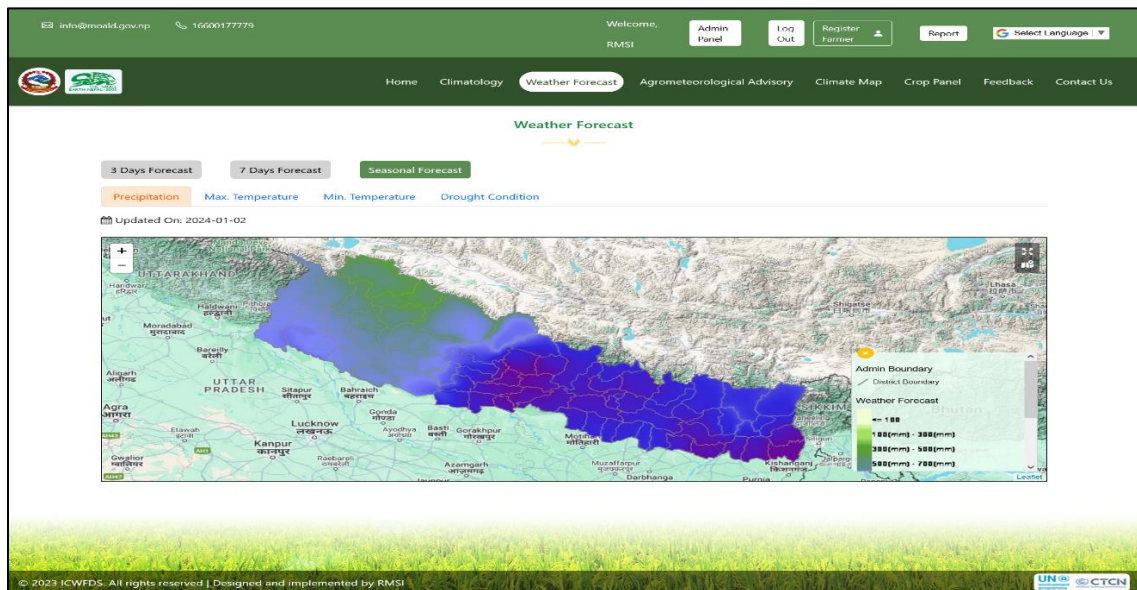


Figure 7: Web page to select seasonal forecast

The web page to select seasonal forecast has been displayed in Figure 7. The interactive map will provide the seasonal forecast for precipitation, maximum temperature, minimum temperature, and drought condition. The drought condition has been classified into different categories such as mild, moderate, severe, and extreme droughts. The user can also click on a desired district in the map and the value of the forecast will be displayed for the selected district.

3.3 Agrometeorological Advisories

The link to access the agrometeorological advisories has been placed in the main panel immediate right-hand side of the weather forecast (Figure 8). In the main page, the user can select a desired district and see a graphical representation of all the types of weather forecasts as shown in Figure 9.

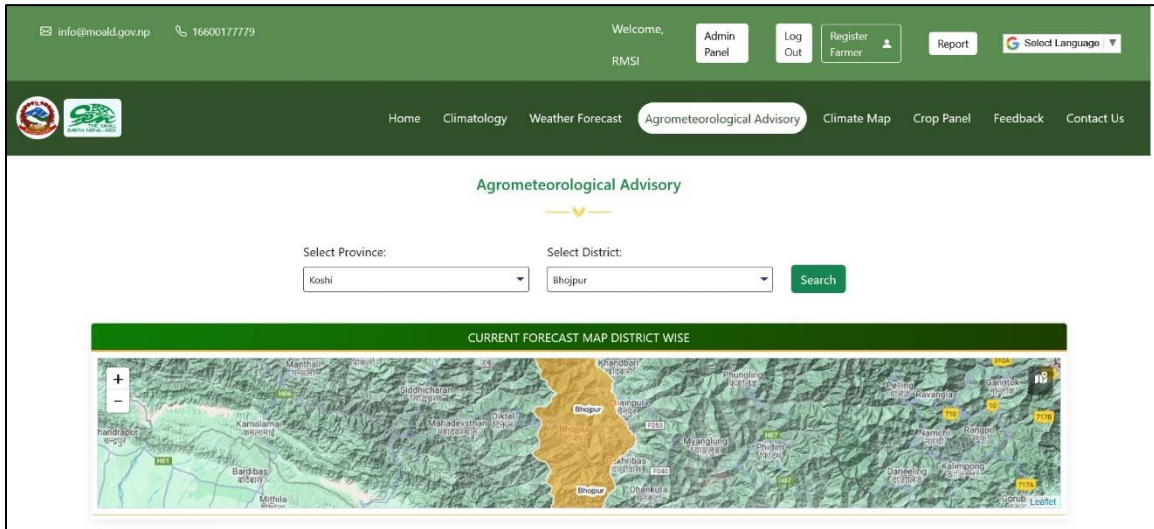


Figure 8: Main page of agrometeorological advisories

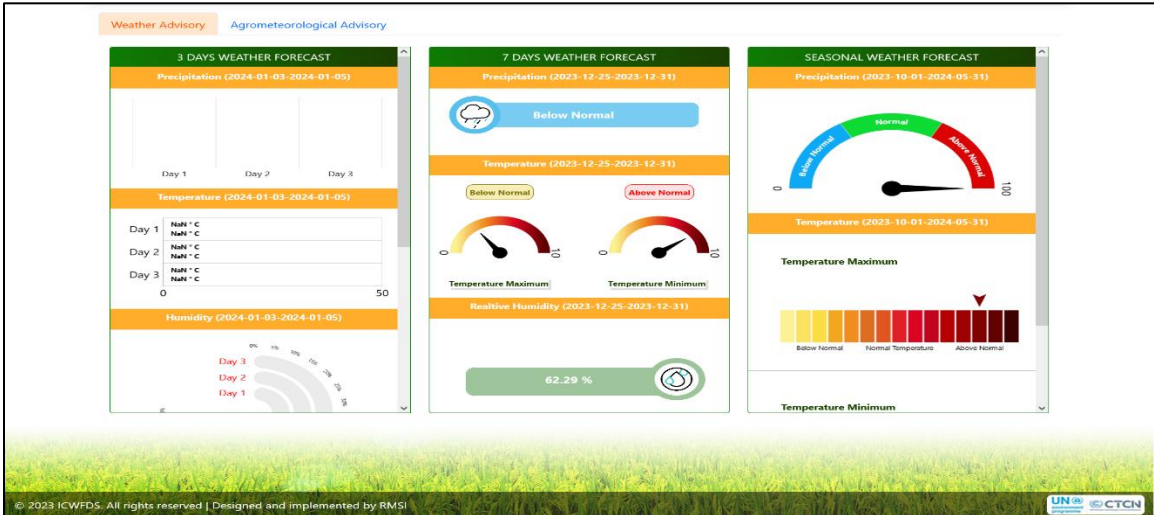


Figure 9: Graphical representation of weather forecast

The link to access agrometeorological advisories has been placed in this page as shown in Figure 10.

Figure 10: Link to access agrometeorological advisories

The advisory for crop type and variety selection can be accessed as shown in Figure 11. This action has to be performed by the system administrator. If summer season has been selected as shown in this figure, the following options will be popped down from the menu of weather data:

- Precipitation is likely to be deficient by between -19% and -50% of normal precipitation.
- Precipitation is likely to be deficient by equal or more than 50% of normal precipitation.
- Precipitation is likely to be in excess by more than 19% of normal precipitation.
- Precipitation is likely to be normal (+19% or -19% of normal precipitation).
- Total precipitation is likely to be normal but duration is likely to be shorter.

If winter season has been selected as shown in this figure, the following options will be popped down from the menu of weather data:

- Temperature is likely to be normal.
- Temperature is likely to be higher than normal temperature.
- Temperature is likely to be lower than normal temperature.

If spring season has been selected as shown in this figure, the following options will be popped down from the menu of weather data:

- Temperature is likely to be normal.
- Temperature is likely to be higher than normal temperature.

After the selection of season and weather data, the advisory for crop and variety selection will be displayed the space below of these drop-down menus. The generated advisories can be sent to the users by the administrator by clicking the send button as shown in red circle of Figure 11.

Figure 11: advisory for crop type and variety selection

After tapping the send button, a pop-up window will appear to send the advisories to the selected users by email (Figure 12). The administrator can select the users from the list and click the send email button. Then, the advisories will be sent to all the selected users by email.

Figure 12: Option to send the advisories to the selected users by email

3.4 Advisory for Sowing Date

The panel of advisory for sowing date has been placed on the right-hand side of the option for the advisory for crop type and variety selection (Figure 13). The season specific advisory has been incorporated in this option for summer, winter and spring seasons for multiple crops such as rice and maize for summer season, wheat and potato for winter season and maize for spring seasons. After selecting the season and crop, the admin has to select the rainfall onset date and then the advisory for sowing date will be generated as indicated in this figure. The admin can send this advisory to all the users by email by tapping the send button as discussed in the previous section.

Figure 13: Advisory for sowing date

3.5 Advisory for deficit or excess rainfall

The panel of advisory for deficit or excess rainfall has been placed at below the option for advisory for crop type and variety selection (Figure 13). The season specific advisory has been incorporated in this option for summer, winter and spring seasons for multiple crops such as rice and maize for summer season, wheat and potato for winter season and maize for spring seasons. The admin can select the season and crop from the respective dropdown menu and below that he/she can see the precipitation condition for previous, current and upcoming weeks (normal/below normal/above normal).

Figure 14: Advisory for deficit or excess rainfall

The most important element in this selection is the selection of weather condition scenario as indicated in Figure 15. Different scenarios have been incorporated for various seasons. In the case of summer season, the following scenarios have been included:

- Previous week rainfall was normal/below normal, current week rainfall is going to be above normal, and above normal rainfall is predicted for the upcoming week.
- Previous week rainfall was normal/below normal, current week rainfall is going to be normal/below normal, and above normal rainfall is predicted for the upcoming week.

- Previous week rainfall was above normal, current week rainfall is going to be normal/below normal, and above normal rainfall is predicted for the upcoming week.
- Previous week rainfall was normal, current week rainfall is going to be normal, and normal rainfall is predicted for the upcoming week.
- Previous week rainfall was below normal, current week rainfall is going to be below normal, and normal rainfall is predicted for the upcoming week.
- Previous week rainfall was normal/above normal, current week rainfall is going to be below normal, and normal rainfall is predicted for the upcoming week.
- Previous week rainfall was below normal, current week rainfall is going to be normal, and normal rainfall is predicted for the upcoming week.
- Previous week rainfall was below normal, current week rainfall is going to be normal/above normal, and below normal rainfall is predicted for the upcoming week.
- Previous week rainfall was normal/above normal, current week rainfall is going to be normal/above normal, and below normal rainfall is predicted for the upcoming week.
- Previous week rainfall was normal/above normal, current week rainfall is going to be below normal, and below normal rainfall is predicted for the upcoming week.
- Previous week rainfall was below normal, current week rainfall is going to be below normal, and below normal rainfall is predicted for the upcoming week.
- Previous week rainfall was above normal, current week rainfall is going to be above normal, and above normal rainfall is predicted for the upcoming week.

In the context of winter and spring seasons, following scenarios have been included:

- Previous week mean temperature was above normal, current week mean temperature is going to be above normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was normal, current week mean temperature is going to be above normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be above normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was above normal, current week mean temperature is going to be normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was above normal, current week mean temperature is going to be below normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was normal, current week mean temperature is going to be below normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was normal, current week mean temperature is going to be normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be below normal, and above normal mean temperature is predicted during the upcoming week.

- Previous week mean temperature was normal, current week mean temperature is going to be normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be below normal, and above normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was above normal, current week mean temperature is going to be below normal, and normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be normal, and above mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be above normal, and normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was normal, current week mean temperature is going to be below normal, and normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was above normal, current week mean temperature is going to be above normal, and normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was above normal, current week mean temperature is going to be normal, and normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was normal, current week mean temperature is going to be above normal, and normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be normal, and below normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was above normal, current week mean temperature is going to be normal, and below normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was normal, current week mean temperature is going to be below normal, and below normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be below normal, and below normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was above normal, current week mean temperature is going to be above normal, and below normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was normal, current week mean temperature is going to be above normal, and below normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was normal, current week mean temperature is going to be normal, and below normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was above normal, current week mean temperature is going to be below normal, and below normal mean temperature is predicted during the upcoming week.
- Previous week mean temperature was below normal, current week mean temperature is going to be above normal, and below normal mean temperature is predicted during the upcoming week.

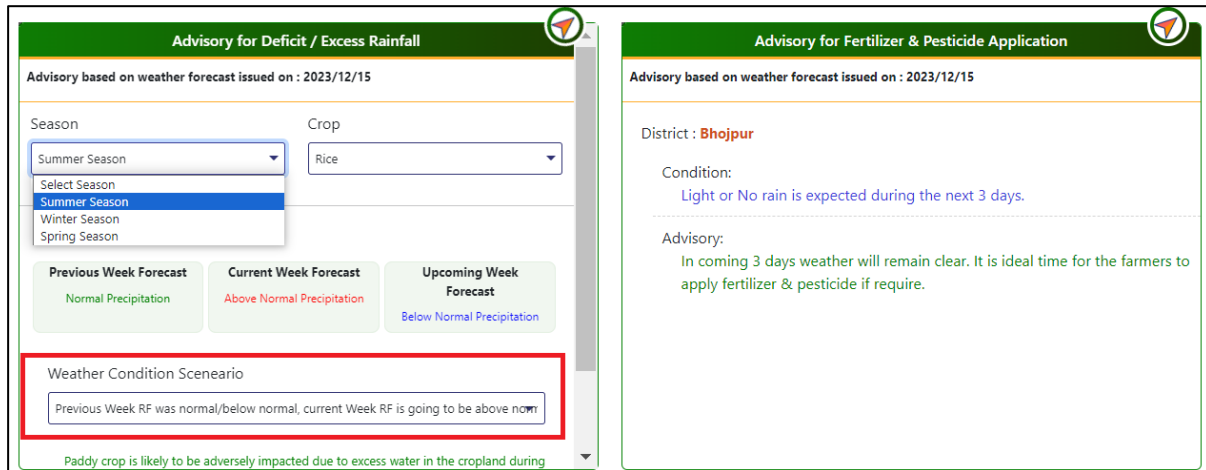


Figure 15: Selection of weather condition scenario in advisory for deficit or excess rainfall

After selecting the weather condition scenario, the crop and season specific advisory for deficit/excess rainfall will be generated in the space below this drop-down menu. The admin can send this advisory to all the users by email by tapping the send button as discussed in the previous section.

3.6 Advisory for fertilizer and pesticide application

The application for fertilizer and pesticides are solely depends on occurrence of upcoming rainfall. If a sudden rainfall happens within a few days after the application, all the fertilizer and pesticides will be washed away and it will cause a financial loss to the farmer. Hence the 3-day weather forecast is very useful for determining the application of fertilizer and pesticides. Hence, the advisory for the application of fertilizer and pesticides based on 3-days weather forecast has been developed as indicated in Figure 16. It will automatically generate based on season and 3-day weather forecast and admin can send this advisory to all the users by email by tapping the send button as discussed in the previous section.

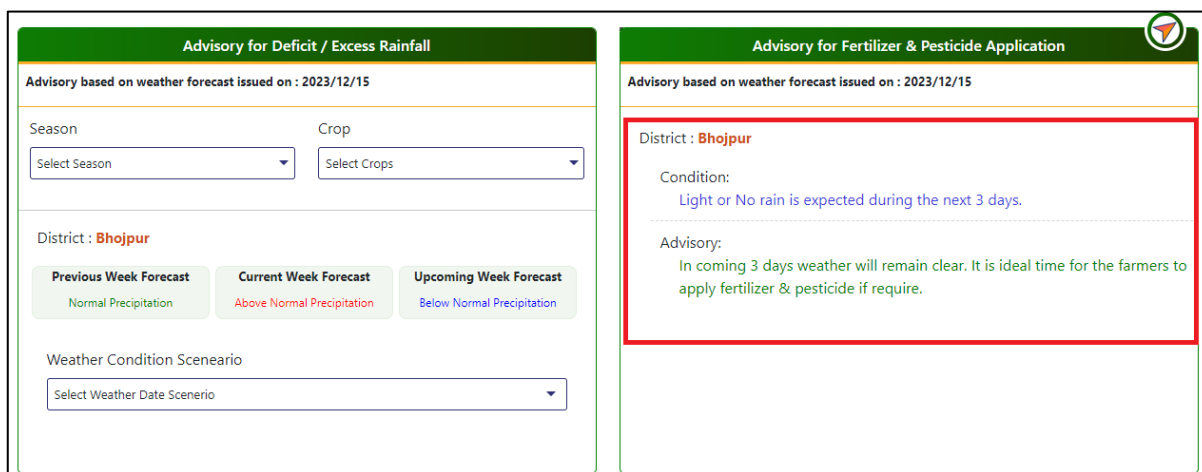


Figure 16: Advisory for fertilizer and pesticide application

3.7 Advisory for pest and disease infestation

The advisory for pest and disease infestation has been developed based on current weather condition and weather forecast as shown in Figure 17. The congenial weather condition for the occurrence of pest and diseases have been identified and incorporated in this advisory. The season specific advisory has been incorporated in this option for summer, winter and spring seasons for multiple crops such as rice and maize for summer season, wheat and potato for winter season and maize for spring seasons. The user can select the respective season and crop and automatically the advisory will be generated below based on current weather condition and weather forecast. The admin can send this advisory to all the users by email by tapping the send button as discussed in the previous section.

Figure 17: Advisory for pest and disease infestation

3.8 Advisory for harvest

The crop harvest is very much weather dependent because, avoiding rain during harvest is essential for many crops to prevent damage and maintain quality. Hence the 3-day weather forecast is very useful for determining the crop harvest. Therefore, the advisory for the harvest based on 3-days weather forecast has been developed as indicated in Figure 18. It will automatically generate based on season and 3-day weather forecast and admin can send this advisory to all the users by email by tapping the send button as discussed in the previous section.

Figure 18: Advisory for harvest

3.9 Advisory for post-harvest

The weather forecasts are essential for effective crop storage after harvesting, enabling farmers to implement strategies that preserve the quality of the crops, prevent spoilage, and mitigate the risks associated with environmental factors. The weather forecast help for crop storage in many ways such as maintaining optimum ambient temperature and humidity levels, preventing condensation, pest control, ventilation, energy efficiency and so on. Hence advisory for post-harvest has been developed based on 3-days weather forecast and presented in Figure 19.

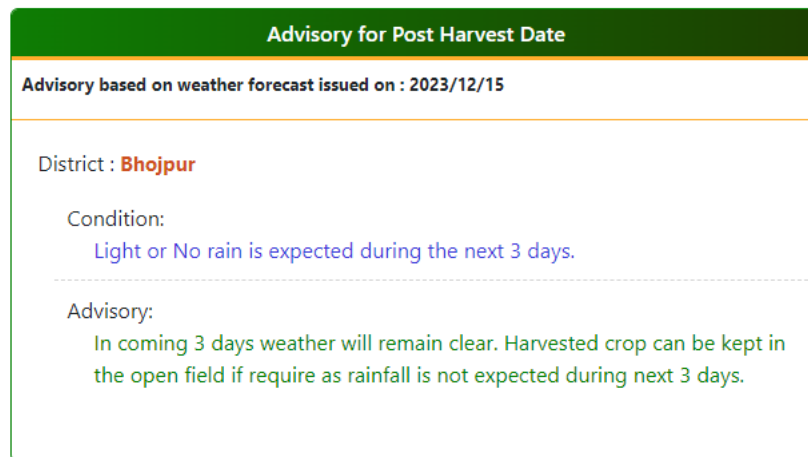
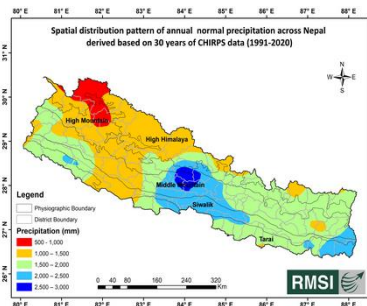


Figure 19: Advisory for post-harvest

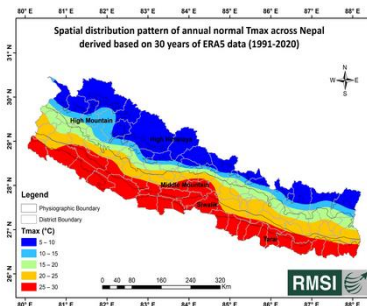
3.10 Climate Map

The spatial maps of precipitation, maximum temperature, and minimum temperatures over Nepal during annual and monsoon (June-October) seasons have been prepared and presented in Figure 20. The user can click on desired map and thereby an enlarged vision of it will be available. The link to access these maps is placed in the main panel of this API and immediate after the link to agro-met advisory.

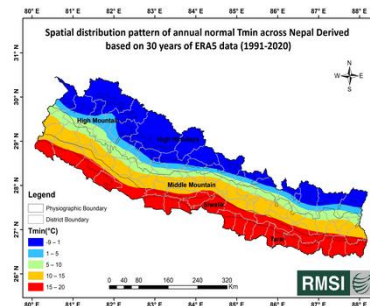
Normal Annual Rainfall



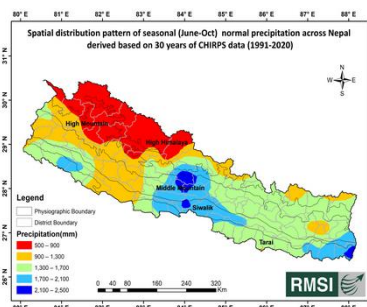
Normal Annual Max. Temperature



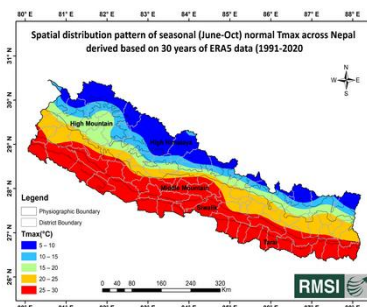
Normal Annual Min. Temperature



Normal JJASO Rainfall



Normal JJASO Max. Temperature



Normal JJASO Min. Temperature

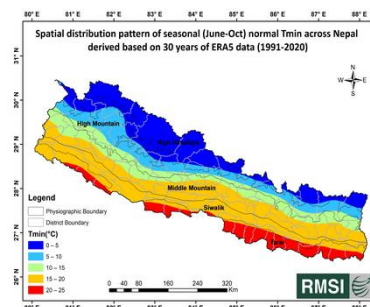


Figure 20: Spatial maps of precipitation, maximum temperature, and minimum temperature over Nepal during annual and monsoon seasons

3.11 Cropping Calendar

The cropping calendar for all the major crops for all the districts during all the major three seasons in Nepal have been prepared as presented in Figure 21. The season specific crop calendars have been incorporated in this option for summer, winter and spring seasons for multiple crops such as rice and maize for summer season, wheat and potato for winter season and maize for spring seasons. The link to access these maps is placed in the main panel of ICWFDS and immediate after the link to weather maps. These calendars have been prepared by conducting comprehensive literature review. The user can select the desired province from the first drop down menu and thereby all the districts falling in that province will be listed in the second one. Then the user can select the desired district, season and crop, and thereby the respective crop calendar will be displayed in the panel placed below.

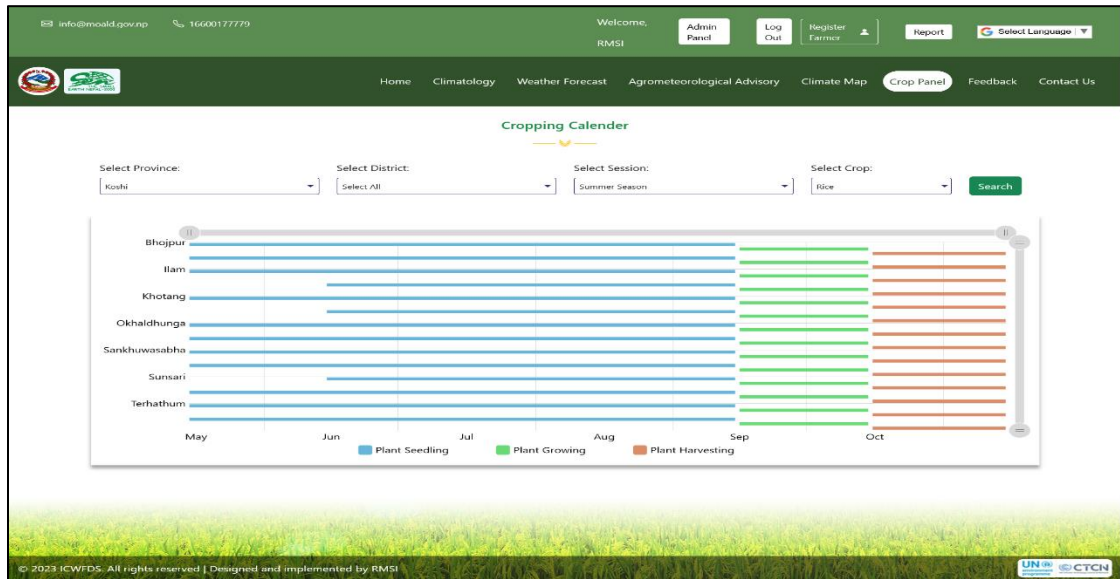


Figure 21: Cropping calendar for all the districts, seasons and crops

3.12 Feedback form

The users are encouraged to submit their feedback and concerns about this API. The feedback form is available by tapping the respective link placed in the main panel. A feedback form will be opened as displayed in Figure 22. The user can enter the full name, mobile number, subject, email address and finally a detailed message about the concern/doubt/feedback. After filling the required fields, the user can click on submit form. A token number will be generated and an email will be sent to the administrator about the submitted feedback. The user can submit their message in either English, Hindi or Nepali languages. The status of all the feedbacks by the users will be available in the bottom of the feedback form as shown in Figure 23.

The user can regularly interact with the administrator until to get the resolution of the feedback. The status of the feedback will be displayed in the far-right side of the panel as not seen, pending, resolved and rejected. The status of the message will be showed as “Not seen” until the administrator notices the message. If the administrator replied and the user is satisfied with the response, the user can change the status as “Resolved”. If the user is not satisfied the response by the administrator, the user can assign the status as “Pending”. If the administrator feels that, the message is not appropriate, then he/she can reject the message and then the status of the message will be displayed as “Rejected”. The user can filter the status of a particular message by applying the respective token number.

Figure 22: Form to submit feedback and concern about this API

User Feedback

List of Previous Feedback

Show 10 entries

Sr.No.	Name	Subject	Feedback	Date	Status	Response
1	Uttam Singh	Other	Rice crop has been infected with a pest. Please advise how to manage.	2023-09-20	Resolved	🟢
2	9999	Report a Bug	बज्रिका मुद्रातः विहार में विरुद्ध प्रमंडल के चार जिले शिवहर, सीतामढ़ी मुजफ्फरपुर, वैशाली एवं दरभंगा प्रमंडल के समस्तीपुर एवं मधुबनी जिला के पश्चिमी भाग में बोली जाने वाली एक भाषा है। भारत में २००९ की जनगणना के अनुसार इन जिलों के लगभग ६ करोड़ ९५ लाख लोग बज्रिका बोली हैं	2023-10-26	Resolved	🟢
3	Shivang	Other	Rice crop has been infected with a pest. Please advise how to manage.	2023-12-03	Resolved	🟢
4	Sandeep	Other	What are the management options for inundation of paddy fields?	2023-12-01	Rejected	🔴
5	Shivang Bhatnagar	Other	Need to know more about the rice crops/, that the crop is infected with some of the desiese	2023-12-05	Resolved	🟢
6	User 1	Other	Hispa insect Probelm	2023-12-05	Pending	🟡
7	Rmsi	Other	Rice crop is infected what to do now?	2023-12-07	Resolved	🟢

Showing 1 to 7 of 7 entries

Previous 1 Next

Figure 23: Status of the feedback by the users

3.13 Contact details

The contact details of the authority to be contacted for any types of enquiries of this project has been furnished as shown in Figure 24. The link for it placed at the end of the main panel of ICWFDS.

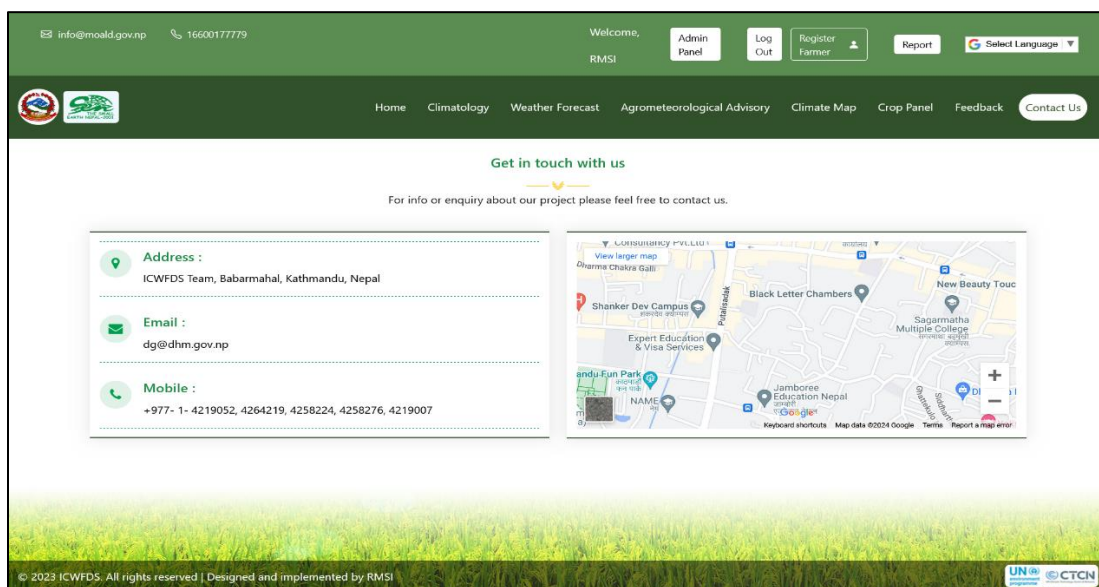


Figure 24: Contact details to any enquiry related to this project

Mr. Shivang Bhatnagar had conducted a detailed demonstration on all the features of ICWFDS and interacted with the participants. He had made the live demonstration of how to submit feedback and response by the email. He sent the various advisories to the email of the few participants and they confirmed the reception of the same. He informed them that all the advisories by ICWFDS will be received by the users through email, WhatsApp, and SMS automatically. He demonstrated the procedure for submitting feedback form and their status by submitting the sample messages and the users are satisfied with it. Finally, he sent the sample advisories to the selected participants by email, SMS, and WhatsApp and the participants confirmed the reception of the same. It indicates that, ICWFDS is functioning successfully with all of its features at this location. The photograph of the workshop and testing of API at Malangwa have been furnished in Figure 25.



Figure 25: Photographs of the workshop and API testing at Malangwa, Sarlahi district situated in Tarai plains of Nepal

The RMSI team interacted with the participants till 05.30 PM (NPT) and clarified all of their queries and the participants were satisfied with the workshop and API as well as the interactions. The participants provided good feedback on the API and their feedback are furnished in section 10.1 of Annexure-2.

4 Day 3 (04th December 2023)

The RMSI team started from Malangwa by 09.00 AM on 04th December 2023 to the second location named Rainas Municipality which is situated in Lamjung district in Central Nepal. This location represents the Middle Mountains region in the country. The team started by road from Malangwa to Lamjung through Hatauda-Mugling-Dumre route and the total distance for this journey was 305 kilometers. The national expert, Dr. Sujata Tamang joined with the team from Mugling and together we proceeded to the Rainas Municipality. The team arrived at the destination by 07.00 PM (NPT) and stayed at Hotel Rijan at Rainas municipality.

5 Day 4 (05th December 2023)

The team along with national expert Dr. Sujata Tamang, reached Rainas Municipality Centre by 09.30 AM (NPT) which was the venue of the workshop and API testing. The team made the initial arrangements for the workshop and API testing. By 10.00 AM (NPT) all the invited participants have arrived at the venue.

The total number of participants was 40 which is found to be overwhelming response of the local farming community and government officials for this program. The details of these participants are furnished in section 9.2 of Annexure-1.

The registration processes were completed by 11.30 AM and the meeting started with the self-introduction by the participants. It is followed by the brief introduction about the workshop and API testing by Dr. Sujata Tamang.

Thereafter, Dr. Sandeep VM, the team member of RMSI, explained the major objectives of this present assignment and the importance of the API for the dissemination of advisories based on three-day weather forecast. He explained the weather and climatic features of Nepal and the past and future climate scenarios of the country. He briefed the impact of climate change and weather aberrations on different sectors in Nepal. He also explained the weather observation system and its importance in Nepal. He briefed different types of weather forecasting services and their significance and applications. Then he explained about the Department of Hydrology and Meteorology (DHM), which is the agency providing weather related services in the country and its various types of services and their uses in different sectors. Finally, he briefed the importance of the API which was developed as part of this assignment and its usage in disseminating the advisories based on three days weather forecast in Nepal. He also explained the past experience and success stories of RMSI in developing similar kind of applications over various countries in Asia and Africa.

The live demonstration and testing of API has been conducted by Mr. Shivang Bhatnagar who is the key developer of API. He started with the major features of API. He explained about all the pages and features. He started with the introduction, followed by climatology, weather forecast and weather maps. Then he given a detailed explanation about agro-met advisory section such as, how to generate the agro-met advisory, how to select different options in different categories and how to send these advisories to the users. He also explained how to change the features of advisories by the administrator. He explained how to register a farmer and how to submit feedback and interact with the administrator. He explained how these advisories are received by email. He demonstrated the reception of these services by email with the selected participants of the workshop and they confirmed the receipt of the advisory. He also demonstrated how these advisories are received automatically through SMS and WhatsApp. He tested the dissemination of these services through SMS and WhatsApp with the participants of the workshop and they confirmed the receipt of the message through these manners. It indicates that, this API is functioning successfully with all of its features at this location. The photograph of the workshop at Rainas Municipality have been furnished in Figure 26.



Figure 26: Photographs of the workshop and API testing at Rainas Municipality, Lamjung district situated in middle mountain of Nepal

The team interacted with the participants till 05.30 PM and clarified all of their queries. The participants provided good feedback on the API and their feedback are furnished in section 10.2 of Annexure-2.

After that, the RMSI team started from Rainas Municipality for Kathmandu by road through Dumre-Mugling route and the total distance of this journey was around 160 kilometers. The team arrived at Kathmandu by 12.00 AM on 06th December 2023 and stayed night at Airport Hotel, Kathmandu.

6 Day 5 (06th December 2023)

The RMSI team started from Airport Hotel, Kathmandu by 08.00 AM (NPT) to Thribhuvan International Airport, Kathmandu. Then they travelled by air from Kathmandu to Biratnagar by Buddha Air (U4 703). The flight departed from Kathmandu at 09.40 AM (NPT) and arrived at Biratnagar Airport at 10.30 AM (NPT). The National expert Dr Rajendra Uprety joined with RMSI team from Biratnagar Airport. The RMSI team along with the national expert started from Biratnagar Airport by 11.30 AM (NPT) to the third and final location of the workshop and testing of API named Bhojpur in Bhojpur district. This location is situated in eastern Nepal and represents mid-hills regions. The team travelled by road through Biratnagar-Itahari-

Dharan-Dhankuta-Hile route arrived Bhojpur at 08.30 PM (NPT). The total distance of this journey was 195 kilometers. The team stayed at Hotel Vintuna in Bhojpur in the night.

7 Day 6 (07th December 2023)

The team along with national expert Dr. Rajendra Uprety, reached Agriculture Knowledge Centre at Bhojpur by 09.00 AM (NPT) which was the venue of the workshop and API testing. The team made the initial arrangements for the workshop and API testing. By 09.30 AM (NPT) all the invited participants have arrived at the venue. The total number of participants was 30 and which is found as an excellent representation of farming community over this region. The details of these participants are furnished in section 9.2 9.3 of Annexure-1. The registration processes were completed by 11.00 AM and the meeting started with the self-introduction by the participants. It is followed by the brief introduction about the workshop and API testing by Dr. Rajendra Uprety.

Thereafter, Dr. Sandeep VM, the team member of RMSI, explained the major objectives of this present assignment and the importance of the API for the dissemination of advisories based on three-day weather forecast. He explained the weather and climatic features of Nepal and the past and future climate scenarios of the country. He briefed the impact of climate change and weather aberrations on different sectors in Nepal. He also explained the weather observation system and its importance in Nepal. He briefed different types of weather forecasting services and their significance and applications. Then he explained about the Department of Hydrology and Meteorology (DHM), which is the agency providing weather related services in the country and its various types of services and their uses in different sectors. Finally, he briefed the importance of the API which was developed as part of this assignment and its usage in disseminating the advisories based on three days weather forecast in Nepal. He also explained the past experience and success stories of RMSI in developing similar kind of applications over various countries in Asia and Africa.

He handed over the baton to Mr. Shivang Bhatnagar who is the key developer of API. He started with the major features and all the pages of API. He started with the introduction, followed by climatology, weather forecast and weather maps. Then he given a detailed explanation about agro-met advisory section such as, how to generate the agro-met advisory, how to select different options in different categories and how to send these advisories to the users. He also explained how to change the features of advisories by the administrator. He explained how to register a farmer and how to submit feedback and interact with the administrator. He explained how these advisories are received by email. He demonstrated the reception of these services by email with the selected participants of the training program and they confirmed the reception of the advisory. He also demonstrated how these advisories are received automatically through SMS and WhatsApp. He tested the receipt of these services through SMS and WhatsApp with the participants of the workshop and they confirmed the receipt through these manners. It indicates that, this API is functioning successfully with all of its features at this location. The photograph of the workshop at Bhojpur have been furnished in Figure 27.



Figure 27: Photographs of the workshop and API testing at Bhojpur situated in Mid hills of Nepal

The team interacted with the participants till 04.30 PM and clarified all of their queries. We received good feedback from the participants as furnished in section 10.3 of Annexure-2. After the workshop, RMSI team started from Bhojpur for Biratnagar by road through Hile-Dhankuta-Itahari route and the total distance of this journey was around 195 kilometers. The team arrived at Biratnagar by 12.30 AM on 08th December 2023 and stayed night at Hotel Harrison Palace, Biratnagar.

8 Day-7 (8th December 2023)

The RMSI team started by road from Hotel Harrison Palace, Biratnagar by 11.00 AM (NPT) to Bagdogra International Airport, West Bengal, India. The team travelled through Biratnagar-Kakarbhitta road and arrived Bagdogra airport by 02.00 PM (IST). Then they departed from Bagdogra by air at 06.10 PM (IST) and arrived at Delhi at 20.30 PM (IST) by Air India Express I5-766. Finally, the RMSI team reached back after a successful testing as well as training and demonstration of API named ICWFDS for the dissemination of advisory based on 3-day weather forecast at all the selected 3 locations in Nepal.

9 Annexure-1

9.1 List of Participants in the training program on ICWFDS held in Malangawa, Sarlahi District, Nepal on 3rd December 2023

(03-Dec-2023) Training → Sunkey → Sarlahi (Malangawa)

UN environment programme | CTCN | Customized weather and climate information system for climate-resilient agricultural system in Nepal | RMSI

Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
1		Nixma Pandit	Kabalashi, Pithari-Kabli ^a -I	9809659896		
2.		Ritika Sah	kabalashi 10, Salempur	9745 853262		
3.		Radha Kumari Mahata	Malangwa-2	9809600135		
4		Manu Mahata	Malangwa-3	9827892388		
5		chulhiya paswan	Kaudena-3	9826849629		
6.		Shanfi Mahata	Bh'ediyahi-1	9859855278		
7		Manu Mahata	Malangwa-3	9854040059		
8		Bikash Mahata	Kaudena-3	9819813406		

Attendance sheet



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
9	2078/08/1	Krishnamandam Yadav	chakaraghata-05 padariya	9866118857	officialkky57@gmail.com officialkky57@gmail.com	Krishnamandam
10	07/08/17	Amit Kumar San	chakaraghata-5 padariya	9845000771	losek20f8@gmail.com	Amit Kumar
11	2080/08/17	BINOD KUMAR RAY	KAUDEN : 5	9801676620	BINODYADAV@gmail.com	Binod
12	2081/08/17	Jitendra Kumar San	chakaraghata-8	9844584854	jitendra3564@gmail.com	Jitendra
13	2080/08/17	Manoj Kumar Yadav	kabilahni-03	9840862158	manojyadav3@gmail.com	Manoj
14	2080/08/17	Ramprasad Yadav	chakaraghata-9	9807622226	-	Ramprasad
15	2078/08/17	Kam Kewal Ray	chakaraghata-6	9746633847	-	Kam Kewal
16	2078/08/17	Budhimal Mand	matuzgwa-6	820222325 968834525 9744369898	-	Budhimal

Attendance sheet



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
17	2080/08/17	UMESH YADAV	KAUDENA	9912049892		
18	2080/08/17	Gyemendra Kumar Yadav	Kathabari, Jais	9846776095		
19		MINOJ RAY	SARMAHARI	9827825867		
20		रामनारायण	सहमपुरी	9827659332		
21		रामदेविकाय	सहमपुरी	9864016608		
22		श्रीतारा देवी	सहमपुरी	9864214188		
23		Ranxmhadi	सहमपुरी	9817640474		12.muchherjee
24		पितायसाय	सहमपुरी	9817640474 9862900995		पितायसाय

Attendance sheet



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
25		SHUSHIL KUMAR Machheto	Chakrajyoti -7	9845529584	sacharisshil 805@gmail.com	
26		PREM KUMAR Machheto	11	9861432265	-	
27		Narendra Prasad Patel	Krishi Uyan Kendra Sarlaha	9865501596	-	
28		Alpana Shah	Krishi Uyan Kendra, Sarlaha	9844003843	alpanashah 2012@gmail.com	
29		Rameshwar Ray yadav.	Kaudenaga-pa (4) Motipur, Sarlaha	9844248373		

Attendance sheet

9.2 List of Participants in the training program on ICWFDS held in Rainas Municipality, Lamjung District, Nepal on 5th December 2023

Date :- 05-Dec-2023 (Tuesday) → Lamjung (Rainas)

Customized weather and climate information system for climate-resilient agricultural system in Nepal

Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
1	2080/9/19	Manisha Shrestha	Rainas-8 Mahigau	9813038366		
2	2080/9/19	Puja Pandey	Rainas-6 Pichvai	9846506108		
3	2080/9/19	Parwati Ramdal	Rainas-6 Dhawikawa	98216313871		
4	2080/8/19	Sita Basaula	Rainas 6 Dhamilikawa	9846181653		
5	2080/8/19	Sochana Laudari	Rainas 6 Dhamilikawa	9846353875		
6	2080/8/19	Panchu Maya Tamang	Rainas 6 Shyale	9808386634		
7	2080/8/19	Shanta Kandel	Rainas-5 Tinripa	9817117900		
8	2080/8/19	Jyoti Ramdal	Rainas - 7 Garambe Shi	9826157648		

Attendance sheet



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
9	2080/8/9	Sangita Poudel	Rainas-3	9745365448		Sangita .
10.	2080/8/9	Suostika Shahi	Rainas-3	9826611563		<i>[Signature]</i>
11.	2080/8/9	Ganesh Baniya	Soubhagyodaya M. S.S. Rainas-4	9845721307	baniyaganesh12@gmail.com	<i>[Signature]</i>
12	2080/8/9	GOKUL NEPAL	Rainas-5	9845717099	gokulnepal601@gmail.com	<i>[Signature]</i>
13	2080/8/9	Min Balsewor Fungy	Rainas-6	9846316787		<i>[Signature]</i>
14	2080/8/9	Suman Adhikari	Rainas polytechnic Institute	9846180663	suman.iaas2079@gmail.com	<i>[Signature]</i>
15	2080/8/9	Atishud Prustha Gurimire	Rainas-6	9846472967		<i>[Signature]</i>
16	2080/8/9					
16	2080/08/9	Bhagawati Khande	1: 4	9846745539		Bhagawati

Attendance sheet



Date :- 05/Dec/2023 (Tuesday)



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
23	2080-8-19	Prakash Raj Paudel	Rainas Municipality / C.A.O.	9848302362	rainasmunicipality@gmail.com	P. R. Paudel
24	"	Chandira Adhikari	1	9846358523		Chandira
25	2080-8-19	Bibek Bhatta	Rainas-5 Student	9866423217	Bibek.sudarshan101@gmail.com	Bibek
26	"	Shree Krishna Paudel	Rainas 3	9856088828	Paudel Shree Krishna065@gmail.com	Shree Krishna
27	2080-8-19	Kumar Gurung	Rainas-9	9846191839	K.gurung2@gmail.com	Kumar Gurung
28	2080-08-19	Somip Gurung	Rainas-9	9849841474	Somip1920SD@gmail.com	Somip Gurung
29	2080-8-19	Paramjit Adhikari	Rainas-4	9846609074	adhikari paramjit@gmail.com	Paramjit Adhikari
30	"	Bishnu Khadka	Rainas-4	9846358923	-	Bishnu Khadka

Attendance sheet



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
319.	208011/18	Ramchandra Mishra	Rainas-7	98067998019		
320.	208018/18	Buddhi Rajbhatta	Rainas-2	9806408190	buddha.buddi@gmail.com	
331.	2080108/18	Harayan San Shakuni	Rainas-2	9806788342		
3412.	2080108/18	Manoj B. K.	Rainas-9	9805108960	-	
3525	2080108/18	Yubraj Majakoti	Rainas-5	9843623554	bibas.majakoti@gmail.com	
3614	2080108/18	Banik Bhatta	Rainas-5	9846816662	banik.bhatta12@gmail.com	
3718	2080108/18	Baburam Shrestha	Rainas-5	9868277285	baburamshrestha@gmail.com	
38	2080108/18	Bishnu Bab Kadeliya	Rainash-8	9846860925	kadelibishnu254@gmail.com	
39.	2080108/18	Surendra Gurung	Rainash-10	9843618179	Surengg	
Uo.	"	Kisan Adhikari	Rainas	9768418214	Surengurung321@gmail.com	

Attendance sheet

9.3 List of Participants in the training program on ICWFDS held in Bhojpur, Bhojpur District, Nepal on 7th December 2023

Date: 7th Dec 2023 (Thursday) → Koshi (Bhojpur)

Customized weather and climate information system for climate-resilient agricultural system in Nepal

Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
1	2080/08/21	Pratiksha Shrestha	Bhojpur-5	9840557474	stha.pratiksha12@gmail.com	
2	"	yooshika Thapa	Arun-4	9868717800	yooshikathapa@gmail.com	
3		Sunita Chauhan	Rampurasadi-5	9863671413	sunita.chauhan42@gmail.com	
4		Kabita Rai	Rampurasadi-7	9843916453	.kabita.rai	
5		Phabinchra Pradhan	Bhojpur-5 Singer Sanivaha Sasim	982085932	PhabinchraPradha@gmail.com	
6		Deepa Pradhan	Bhojpur-4 Dawon.	9819023678	DeepaPradhan87@gmail.com	
7		Nawaraj Panija	Rampurasadi-3 Bhulke	9749201609	nawarajpanija12345@gmail.com	
8	"	Dev Chandrakali	Bhojpur-4	9842122492	Dev.Chandrakali75@gmail.com	

Attendance sheet



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
9	2080108/21	Sharan Pradhan	Bhojpur-5	9842212321	sharan.pradhan.08@gmail.com	
10	2080108/21	Rajan Pradhan	" - 3	9819337213	rajan.pradhan.21@gmail.com	
11	2080108/21	Amrit Mayor	Rampurasrai Bhojpur-6	9842757205	sathimayor0102@gmail.com	
12	2080108/21	Nirmal Thapa	Rampurasrai Rai Nuni -6	9867693121	Nkng82@gmail.com	
13	2080108/22	Jit Bahadur Tamol	" - 4	9849402146		
14	202011/29	Sangita Pradhan	Bhojpur-5	9896402007		
15	202012/29	Pravin Kumar Khawra	Bhojpur-8	9868757207		
16	202012/29	Urmila Pradhan	Bhojpur-8	9840989945		

Attendance sheet



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
17	2020/12/29	Menyika Khadka	BHOJPUR, 2	9868980904		
18	2020/01/09	Kaushila Bista	PMAMP, Bhojpur	9859088900	pmamp.piu.bhojpur@gmail.com	
19	2020/08/22	Junita Rai	PMAMP, Bhojpur	9852077376	pmamp.piu.bhojpur@gmail.com	
20	2020/08/21	Ganesh Khatri	AKC Bhojpur	9852062130	ganeshkhatri89@gmail.com	
21	2020/08/21	Yogendra Rai	AKC Bhojpur	9857623610	Rai.yogendra113@gmail.com	
22	2020/08/21	Tejendra Karri	AKC Bhojpur	9862573712	karitej909@gmail.com	
23	2020/08/21	Subash Dahal	Agriculture Knowledge centre, Bhojpur	+9779862160720	subashdahal720@gmail.com	
24	2020/08/21	Gita Dahadi	Bhojpur-8	9844009416	dahadigita922@gmail.com	

Attendance sheet



Sr. #	Date	Name	Organization & Address	Mobile No.	Email	Signature
25,	080108/20	Asmita Bhujel	Bhojpur Municipality	9814359592	-	
26	080108/21	Bhupal Pandey	Bhojpur m. 8	9849635427	Bhupal Pandey 3692@gmail.com	
27	080108/21	Resina Nepali	Bhojpur m.-7	9800944962	rcsi.nepali 34@gmail.com	
28.		Bdr. Tirtha Tamang	Bhojpur A.C. Bhojpur	9842099817		
29 30		Mahendra Neupane	Bhojpur 5	9862949675		
30.		Prem Kr. Tamang	Bhojpur-9	9842546722		
31.						
32.						

Attendance sheet



10 Annexure-2

10.1 Feedback from the Participants for the training program on ICWFDS held in Malangawa, Sarlahi District, Nepal on 3rd December 2023

Sunday → Sarlahi (Training) ①

Date: 03-Dec-2023

SR.NO	NAME	FEEDBACK OF THE TRAINING & TRAINEES
1	Narendra p. Patel	This app is good for farmer for agriculture cultivation. Farmer can cultivate agriculture practice according season.
2	Ram Nath Yadav	This training and trainees better
3	Manoj Kumar Yadav	This app is good for peoples cultivation lead for peoples farmer.
4	Jitendra das	के कार्यक्रम अह्न निर्माता तथा प्रशिक्षक एवं App मातृ सेवागर् को लागि, अह्न मात्र कति कार्यक्रम हुन्



2

Date :

SR.NO	NAME	FEEDBACK OF THE TRAINING & TRAINEES
1	बसुन्धरील कामा मधनी	धनका नालीम बहुत अच्छा लगाया है.
2	प्रेम कुमार मजुगी	इस से आपका काम का लक्षिक अपने मंगलदा से
3	श्रीमान किशोर मधनी	सिखाने वाला काम बहुत अच्छा है.
4	विकास लाल खड्का	यह तकिया से हमलोगोको बहुत सुत्रपडुका है यह प्रोसिम केकारना से कुछ उठाना प्रकमी होता है
5	Kaisharrandan Yadav	
6	Amit P.D.S	How we farming unseason farming in different season, different farming.



3

Date :

SR.NO	NAME	FEEDBACK OF THE TRAINING & TRAINEES
1	Alpana shah	It's good to farmers to know about wheather. we are very thankful to you for your guidlines.
②	Rangbam Ruy yudav	This We are so satisfied, and its best for farmer. we are better understand by them.
③	Nidma Pandit	We are It's good to farmer's to know about wheather. ←
4.	Ritika Sah	It is good to farmers to know about wheather. We are very thankful.
5	राधा कुमारी महता	हमे उमादा लग मे सम बरमे समग्र कब. कब मौसम बदलत हे आप बताउ ।
6	मनुष महता	हमे मौसम को बारेमे शिकाई कर बताउवा SMS मे जानकारी लिखकर मौसमको बारेमे जानकारी



4

Date :

SR.NO	NAME	FEEDBACK OF THE TRAINING & TRAINEES
		आजको कार्यप्रणालीबाट आधा लगेको छु
	रामदासी शर्मा	बहुत फेरि र बासः
		आजको कार्यप्रणालीबाट आधा लगेको छु
	विष्णु शर्मा	बहुत फेरि र बासः
	शान्ती शर्मा	प्रशिक्षण जारीस बढावा गरेरै हामी आधा भाग लगेका छौं।
	अच्युत शर्मा	हामी आधा लगेका छौं।

10.2 Feedback from the Participants for the training program on ICWFDS held in Rainas Municipality, Lamjung District Nepal on 5th December 2023

Date: 5 - December - 2023

Sl No	Name	Feedback of the Training
	Balaram Panajuli	This app is very interesting and will help us for learning new technologies.
	Powen Dhakal	यस Technology को बारे में जानकारी अत्यन्तै उपयोगी है।
	Praburaj Ray Poudel	This app is good.
	Manisha Shahigiri	ठिक है!
	Puja Pandey	मैं थोड़ा बिलम्ब से आया तो ज्यादा महारत नहीं आया पर सब कोले ठीक है।
	shanta kandel	अच्छे से समझ आया है। शामिल बहुत ठीक है।
	sita Basaula	कार्यक्रम बहुत प्रभावी था।
	Panchu Maya Tamang	This will help the farmers to utilise the resources especially irrigation meaningfully. Thanks for the app.

Date: 5-December-2023

Sl No	Name	Feedback of the Training
	Shree Krishna Poudel	This is very interesting and good knowledge
	Kumar Gurung	नया जानकारी जानकर अछा लगै राह्य
	Sarajit Gurowsky	क्याक्या अछा भा, बहुत लाभकारी।
	Param Bir Adhikari	Good to know about the app. very well presented.
	Bisbhu Khadka	बारीश बढ्नाव कारण जानकर अछा लक्षणा।
	Ranhendra Mishra	SMS और App से फायदे जानना नया अनुभव था।
	Buddhi Raj Bhatta	Very new and enriching experience.
	Narayan Sen Shukra	Explanation is good & keen understanding about the app



Date: 5-December-2023

Sl No	Name	Feedback of the Training
	Mangj Bk	I can't understand in full English. Hindi me वेदतर दीता।
	Yubang Majakoti	GOOD!
	Banik Bhatta	कार्यक्रम अच्छा लगा।
	Babu Ramshrestha	बहुत ठीक लगा।
	Bishnu Bar Yadav	सजा आ गया। 'good था।
	Surendra Gung	हमारी भाषा में दीता तो वेदतर दीता और भी।
	Kisan Adhikari	ठीक है। आपका तरीका

Date: 5 - December - 2023

Sl No	Name	Feedback of the Training
	Sochana Laudari	In the training I found helpfull content for us.
	Jyoti Ramlal.	satisfied with the training .
	sargita Poudel	आइदा तरीका लगा बोजुन ।
	Swastika Shahi	बडुन ठीक राओ ।
	Gonesh Baniya	नया अनुभव राओ ।
	Gokul Nepal	मौसम मे बदलाव था से जानना होमा अडा है ।
	Suman Adhikari	Experienc was good
	Min Baladhy Famy	Great experience and the training was good.

Date: 5 - December - 2023

Sl No	Name	Feedback of the Training
	Koshera Phuyken Giamirika	very interesting and learned a lot
	Bhaganaji Kshudra	GOOD TO GO!
	Dr. Bibek Bhatta rai	This training is useful farmers.
	Bipana Sirmal	very glad to attend the training
	Bishnu bdr gurung	किसान के लिए उपयोगी है अर्थात है।
	Ganga Basnet	Good to learn from the training.
	Chandira Aalnika	असलमा के लिए उपयोगी है।
	Bibek Bhatta	Good



10.3 Feedback from the Participants for the training program on ICWFDS held in Bhojpur, Bhojpur District Nepal on 7th December 2023

(Bhojpur)

Date: 07th - Dec - 2023

SR.NO	NAME	FEEDBACK OF THE TRAINING & TRAINEES
1	Subash Dahal	portal menu/option should be in local language understandable to farmers. Advisory recommendations must be in local language. It would be better if the advisory contacted the farmers personally.
2.	Asmita Bhujel	I would like to explain in Hindi because I can understand in Hindi.
3	Bhupal Pandey	It would be better the farmers personally
4.	Kabita Rai	my good two
5	PRADIN K. KHADKA	good शिक्षा है अपना तरीका
6	Gita Pahari	मैं खुद से नहीं आया तो इन्हें राभी नहीं बुझेगा
7	Nowaraj Baniya	ठिक है।



Date :

SR.NO	NAME	FEEDBACK OF THE TRAINING & TRAINEES
8	Dev chandra Rai	बहुत ठिक हुन।
9	शमशेर शर्मा	यहाँ orientation class धेरै राम्रो थियो । तर फेरि धेरै धेरै थियो वा अझै कही class सिगपाए धेरै कही पत्रकारिता (reporting) गर्ने थियो । अझै सिक्नुमा थियो, फेरि धेरै class भयो भने धेरै कही थियो भन्ने हुन्थे।
10	Nirmal Magar	Training is very useful but if we get more time and more classes for this will be more effective for us. Plus, can you guys add Nepali calendar for weather forecast?
11	Sunita Chauhan	बहुत ठिक है
12	Yooshika Thapa	बहुत ठिक है । आफूलाई तालिम



Date :

SR.NO	NAME	FEEDBACK OF THE TRAINING & TRAINEES
13	Deepa Pradharn.	बहुत अच्छा है आपकी तरिका
14.		It is better to be implement present training materials along with nepali languages (translator).
		PR and facial expression and content delivery action is quite good of trainers.



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