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# Corrigendum: Enhancing the resilience of food production systems for food and nutritional security under climate change in Nepal

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## KEYWORDS

adaptation, climate change, food security, malnutrition, nutrition, resilient

## A corrigendum on

## Enhancing the resilience of food production systems for food and nutritional security under climate change in Nepal

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In the published article, there was an error in affiliation 3. Instead of “Policy Initiative Nepal (PIN), Lalitpur, Nepal,” it should be “Policy Initiatives Nepal (PIN), Lalitpur, Nepal.”

In the published article, the initials of author Yadav Prasad Joshi were incorrectly written as YJ. The correct initials in author contribution is YPJ.

In the published article, there was an error in the legend for Figure 1 as published. The corrected legend appears below. “Trend of production of five major cereal crops from 1990 to 2018 vs precipitation trend.”

In the published article, the reference for (Food Agriculture Organization, 2008) was incorrectly written as Food and Agriculture Organization (2008). *Food Security Information for Action Practical Guides*. Rome: FAO. It should be [FAO \(2005\). Food Security Information for Action Practical Guide](https://www.fao.org/3/i5188e/I5188E.pdf). Rome: Food and Agriculture Organization (FAO).

In the published article, the reference for (Food Agriculture Organization, 2015) was incorrectly written as Food Agriculture Organization (2015). *Climate Change and Food Security: Risks and Responses*. Rome, Italy: Food and Agriculture Organization of the United Nations. Available online at: <https://www.fao.org/3/i5188e/I5188E.pdf> (accessed

June, 2022). It should be FAO (2015). *Climate Change and Food Security Risks and Responses*. Rome: Food and Agriculture Organization (FAO). Available online at: <https://www.fao.org/3/i5188e/I5188E.pdf> (accessed June, 2022).

In the published article, the reference for (Ministry of Forestry Environment, 2021) was incorrectly written as Ministry of Forestry and Environment (2021). *Vulnerability and Risk Assessment and Identifying Adaptation Options in the Agric. Food Security, Government of Nepal*. Kathmandu, Nepal. It should be MoFE (2021a). *Vulnerability and Risk Assessment and Identifying Adaptation Options in the Agriculture and Food Security*. Kathmandu: Ministry of Forests and Environment (MoFE), Government of Nepal.

In the published article, the reference for (Group, 2021) was incorrectly written as Group, W. B. (2021). *Climate Change Knowledge Portal: For Development Practitioners and Policy Makers*. Available online at: <https://climateknowledgeportal.worldbank.org/country/nepal/climate-data-historical> (accessed June, 2022). It should be World Bank (2021). *Climate Change Knowledge Portal: For Development Practitioners and Policy Makers*. Available online at: <https://climateknowledgeportal.worldbank.org/country/nepal/climate-data-historical> (accessed June, 2022).

In the published article, the reference for (Ministry of Finance, 2021) was incorrectly written as Ministry of Finance (2021). *Economic Survey Report of 2020/2*. Kathmandu, Nepal: Government of Nepal. It should be MoF (2021). *Economic Survey Report of 2020/21*. Kathmandu: Ministry of Finance (MoF), Government of Nepal.

In the published article, the reference for (MoFE, 2021) was incorrectly written as MoFE (2021). *Vulnerability and Risk Assessment and Identifying of Adaptation Options in Disaster Risk Reduction and Management (DRRM)*. Kathmandu, Nepal: Ministry of Forests and Environment, Government of Nepal. It should be MoFE (2021b). *Vulnerability and Risk Assessment and Identifying of Adaptation options in Disaster Risk Reduction and Management (DRRM)*. Kathmandu: Ministry of Forests and Environment (MoFE), Government of Nepal.

In the published article, the reference for (Chemjong and Kc, 2020) was incorrectly written as Chemjong, B., and Kc, Y. (2020). Food security in Nepal: a review. *Rupantaran Multidiscip. J. 4*, 31–43. doi: 10.3126/rupantaran.v4i1.34015. It should be Chemjong, B., and KC, Y. (2020). Food security in Nepal: a review. *Rupantaran Multidiscip. J. 4*, 31–43. doi: 10.3126/rupantaran.v4i1.34015 and cited as “Chemjong and KC, 2020.”

In the published article, there was an error in the tool that we used for map plotation.

A correction has been made to **Abstract, Method, 2**. This sentence previously stated:

“This study considers temperature, precipitation, and their anomalies as the key factors affecting food production in Nepal. Nationwide precipitation trends along with their association

with the annual production of major cereal crops in Nepal were assessed using data from the last three decades (1990–2018). The annual productions of the major cereal crops were summed and normalized to calculate the production index scores in the districts. Scores were plotted and visualized into maps using the Geographical Information System. In three ecological regions, the distribution of flood and extreme rainfall events and cases of malnutrition from 2005 to 2018 were plotted. The effects of climate change and highest priority adaptation options at the district level were documented through a review of national policies and literature studies and qualitative research based on Focus Group Discussions (FGDs).”

The corrected sentence appears below:

“This study considers temperature, precipitation, and their anomalies as the key factors affecting food production in Nepal. Nationwide precipitation trends along with their association with the annual production of major cereal crops in Nepal were assessed using data from the last three decades (1990–2018). The annual productions of the major cereal crops were summed and normalized to calculate production index scores in the districts. Scores were plotted and visualized into maps using the R programming. In three ecological regions, the distribution of flood and extreme rainfall events and cases of malnutrition from 2005 to 2018 were plotted. The effects of climate change and highest priority adaptation options at the district level were documented through a review of national policies and literature studies and qualitative research based on Focus Group Discussions (FGDs).”

In the published article, there was an error. The sentence was lengthy sentence and several commas made it vague.

A correction has been made to **Abstract, Results, 3**. This sentence previously stated:

“Growing drought-tolerant crops, changes in crop cycle, riverbed farming practices, developing short-term strategies, such as contingency crop planning, changing planting dates, planting short duration varieties, schemes evacuation, and long-term strategies, such as encouraging out-migration of population to safer locations, resettlement programs with transformative livelihood options, and sustainable agricultural practices were found to be key prioritized adaptation measures for a resilient food production system.”

The corrected sentence appears below:

“Growing drought-tolerant crops, changes in crop cycle, riverbed farming practices, and development of short-term strategies, such as contingency crop planning, changing plantation dates, plantation of short-duration varieties, and evacuation schemes. Similarly, long-term strategies, such as encouraging out-migration of population to safer locations, resettlement programs with transformative livelihood options, and sustainable agricultural practices were found to be key prioritized adaptation measures for a resilient food system.”

In the published article, there was an error.

A correction has been made to **Introduction**, 1. This sentence previously stated:

“Nepal is one of the most countries vulnerable to climate change.”

The corrected sentence appears below:

“Nepal is highly vulnerable to climate change.”

In the published article, there was an error. It was a grammatical error.

A correction has been made to **Methods, Study area**, 1. This sentence previously stated:

“Nepal is a landlocked country bordering India to the east, west, and south, and China to the north. It has a diverse geographic distribution in three ecological regions; Tarai (17%), hill (62%), and mountain (21%).”

The corrected sentence appears below:

“Nepal is a landlocked country bordering India to the east, west, and south, and China to the north. It has a diverse geographic distribution in three ecological regions; Tarai (17%), Hill (62%), and Mountain (21%).”

In the published article, there was an error. It was a grammatical error.

A correction has been made to **Methods, Data collection and analysis**, 3. This sentence previously stated:

“The districts were selected in a way to represent the three ecological regions of Nepal, which consisted of mountain (Sindhupalchowk and Dolakha), mid-hill (Kavre and Ramechhap), and inner-Tarai (Chitwan and Makawanpur).”

The corrected sentence appears below:

“The districts were selected in a way to represent the three ecological regions of Nepal, which consisted of Mountain (Sindhupalchowk and Dolakha), mid-Hill (Kavre and Ramechhap), and inner-Tarai (Chitwan and Makawanpur).”

In the published article, there was an error. It was a grammatical error.

A correction has been made to **Results and Discussion: Cereal crop production trend**, 3.

This sentence previously stated:

“In this study, index analysis at the district level shows that the highest production of the major cereal crops is found in the Tabara, Morang, and Jhapa districts. While the lowest production score was found in six hill districts (Achham, Baitadi, Dadeldhura, Doti, Pyuthan, and Western Rukum) and 12 mountain districts [Bajhang, Bajura, Darchula, Dolakha, Dolpa, Kalikot, Humla, Jumla, Mugu, Mustang, Rasuwa, and Taplejung (Figure 2)].”

The corrected sentence appears below:

“In this study, index analysis at the district level shows that the highest production of the major cereal crops is found in the Bara, Morang, and Jhapa districts, while the lowest production score was found in six hill districts (Achham, Baitadi, Dadeldhura, Doti, Pyuthan, and Western Rukum) and 12

mountain districts [Bajhang, Bajura, Darchula, Dolakha, Dolpa, Kalikot, Humla, Jumla, Mugu, Mustang, Rasuwa, and Taplejung (Figure 2)].”

In the published article, there was an error. It was a grammatical error.

A correction has been made to **Results and Discussion, Food insecurity and malnutrition under climate change**, 5. This sentence previously stated:

“Based on the secondary data analysis, we can observe a decline trend of malnutrition cases from 2005 to 2018 in Nepal. The cases of malnutrition are decreasing in the hill and mountain region while they are slightly increasing in the Tarai region.”

The corrected sentence appears below:

“Based on the secondary data analysis, we can observe a decline trend of malnutrition cases from 2005 to 2018 in Nepal. The cases of malnutrition are decreasing in the Hill and Mountain regions while they are slightly increasing in the Tarai region.”

In the published article, there was an error. It was a grammatical error.

A correction has been made to **Results and Discussion, Food insecurity and malnutrition under climate change**, 13.

This sentence previously stated:

“As a result, they have stopped cultivating wheat and mustard, which are previously major crops in their area. Most of the rice growers, particularly at the tail ends of Sindhupalchowk Dolkha and Kavre, shared an occupational disturbance from recurrent floods and droughts.”

In the published article, there was an error. It was a grammatical error.

The corrected sentence appears below:

“As a result, they have stopped cultivating wheat and mustard, which were previously major crops in their area. Most of the rice growers, particularly at the tail ends of Sindhupalchowk, Dolakha and Kavre, shared an occupational disturbance from recurrent floods and droughts.”

In the published article, there was an error. It was a grammatical error.

A correction has been made to **Results and Discussion, Growing drought-tolerant varieties**, 1.

This sentence previously stated:

“Many farmers in the hilly region have converted their paddy fields to maize and finger millet. Some others have started growing ginger and turmeric, which are relatively more drought tolerant than paddy, maize, and millet. These are some of the self-directed local adaptation practices.”

The corrected sentence appears below:

“Many farmers in the Hill region have converted their paddy fields to maize and finger millet. Some others have started growing ginger and turmeric, which are relatively more drought

tolerant than paddy, maize, and millet. These are some of the self-directed local adaptation practices.”

In the published article, there was an error. It was an error due to incorrect abbreviation use.

A correction has been made to **Results and Discussion, Changes in the cropping system, 1.**

This sentence previously stated:

“In the FDGs carried out in Sindhupalchowk and Dholakha, farmers reported that their recent cropping cycle follows wheat—finger millet—potato/maize in a 2-year span.”

The corrected sentence appears below:

“In the FDGs carried out in Sindhupalchowk and Dolakha, farmers reported that their recent cropping cycle follows wheat—finger millet—potato/maize in a 2-year span.”

In the published article, there was an error. It was a grammatical error.

A correction has been made to **Results and Discussion, Migration and resettlement, 1.**

This sentence previously stated:

“There are several river valleys in Nepal, which are very productive and densely populated, such as Tumlingtar of Sanbhuwasabha district, Nepalthok of Kavrepalanchok district, and Manthali of Ramechhap district.”

The corrected sentence appears below:

“There are several river valleys in Nepal, which are very productive and densely populated, such as Tumlingtar of Sankhuwasabha district,

Nepalthok of Kavre district, and Manthali of Ramechhap district.”

In the published article, there was an error. It was a grammatical error.

A correction has been made to **Results and Discussion, Migration and resettlement, 1.**

This sentence previously stated:

“Similarly, the lack of proper irrigation, and climate-induced disaster also compelled people to think of changing their settlement.”

The corrected sentence appears below:

“Similarly, the lack of proper irrigation, and climate induced disasters also compelled people to think of changing their settlements.”

The authors apologize for these errors and state that these do not change the scientific conclusions of the article in any way. The original article has been updated.

## Publisher's note

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Chemjong, B., and KC, Y. (2020). Food security in Nepal: a review. *Rupantaran Multidiscip. J.* 4, 31–43. doi: 10.3126/rupantaran.v4i1.34015

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World Bank (2021). *Climate Change Knowledge Portal: For Development Practitioners and Policy Makers*. Available online at: <https://climateknowledgeportal.worldbank.org/country/nepal/climate-data-historical> (accessed June, 2022).