

## Darwin Initiative Main Annual Report

To be completed with reference to the “Writing a Darwin/IWT Report” Information Note: (<https://www.darwininitiative.org.uk/resources-for-projects/reporting-forms-change-request-forms-and-terms-and-conditions/>).

It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

**Submission Deadline: 30<sup>th</sup> April 2021**

### Darwin Project Information

Project reference	26-022
Project title	Uprating community forest management in Nepal: enhancing biodiversity and livelihoods
Country/ies	Nepal
Lead organisation	ForestAction Nepal
Partner institution(s)	Royal Botanic Garden Edinburgh (BRGE) Kathmandu Forestry College (KAFCOL) Federation of Community Forest User Groups (FECOFUN) Jhapa Division Forest Office Jhapa
Darwin grant value	<b>298,439 GBP</b>
Start/end dates of project	01 June 2019 / 31 March 2023
Reporting period (e.g. Apr 2020 – Mar 2021) and number (e.g. Annual Report 1, 2, 3)	April 2020-March 2021 (year 2)
Project Leader name	Naya Sharma Paudel, PhD
Project website/blog/social media	<a href="https://www.facebook.com/JalthalBiodiversity">https://www.facebook.com/JalthalBiodiversity</a> <a href="https://twitter.com/BiodiversityNep">https://twitter.com/BiodiversityNep</a> <a href="https://www.flickr.com/photos/184289092@N07/">https://www.flickr.com/photos/184289092@N07/</a>
Report author(s) and date	Naya Sharma Paudel, Lila Nath Sharma, Bhaskar Adhikari, Sanjaya Raj Tamang

## 1. Project summary

Nepal's Community Forestry (CF) programme, pioneered in the 1980s, has been largely successful in increasing forest cover, restoring degraded hill slopes and bringing substantial economic and social benefits to rural people. Currently over 22,000 Community Forests User Groups (CFUGs), manage about 2 million ha. forest<sup>1</sup>. Despite these achievements, regulatory instruments, management plans, and institutional practices focus narrowly on a few timber species<sup>2</sup>. Consequently, CF management is heavily skewed towards extractive use, and non-monetary values- including biodiversity and ecosystem services are largely ignored<sup>3</sup>. There is a lack of concrete effort to mainstream biodiversity within CF management as recognized by Nepal's NBSAP (2014-2020)<sup>4</sup>.

This project is taking Jalthal forest (Figure 1) as a model forest system to develop strategies to promote biodiversity and livelihood while addressing site specific threats to biodiversity, based on participatory action research. Jalthal is around 6000 ha remnant moist tropical forest with diverse ecosystems (mixed broadleaved forest, swamps, lakes, rivers, hillocks). It is an Important Plant Area (IPA) with several threatened flora (*Cycas pectinata*, *Magnolia champaca*, *Rauvolfia serpentina*, *Dioscorea deltoidea*)<sup>5</sup>, and habitat of several threatened faunas (*Manis crassicaudata*, *Elephas maximus*, *Leptoptilos javanicus*). A recent survey by the project has revealed that the forest is among the richest site in terms of floral diversity in Nepal and has a unique assemblage of plant species from different floristic regions of the world. The forest is the lowest elevation forest of Nepal but also has a population of several species primarily occurring in midhills of Nepal. The forest is managed by 22 CFUGs and is an important livelihood source for over 80,000 local people including some terai indigenous groups-*Meche*, *Santhal* and *Rajbanshi*.

However, the Jalthal forest is being subjected to multiple threats. These include invasive species, human-wildlife conflict (particularly human-elephant), poaching, illegal timber extraction and timber focused forest management. Invasion of *Mikania micrantha* has become the most critical one. Timber focused management coupled with *Mikania* invasion has hampered biodiversity which in turn has negatively impacted forest dependent local people. The current forest management practices often focus on high value timber species namely Sal (*Shorea robusta*) leading towards increased homogenization and decreased floral diversity.

The project aims to mainstream biodiversity conservation in Nepal's community forests through demonstration of model strategies at site level and capacity building coupled with national level policy dialogues. Following are the specific objectives of the project:

1. To improve forest condition and conserve forest biodiversity through sustainable forest management and capacity enhancement of community forests user group (CFUGs).
2. To demonstrate models of forest restoration by managing and controlling the invasive alien plant species (IAPS), particularly *Mikania micrantha*.
3. To mainstream biodiversity conservation in community forestry programme and policies.

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<sup>1</sup> Community forestry division, Ministry of forests and soil conservation 2019.

<sup>2</sup> Acharya KP 2004. Does Community Forests Management Supports Biodiversity Conservation? Evidences from Two Community Forests from the Mid Hills of Nepal. Journal of Forest and Livelihood 4(1): 44-54

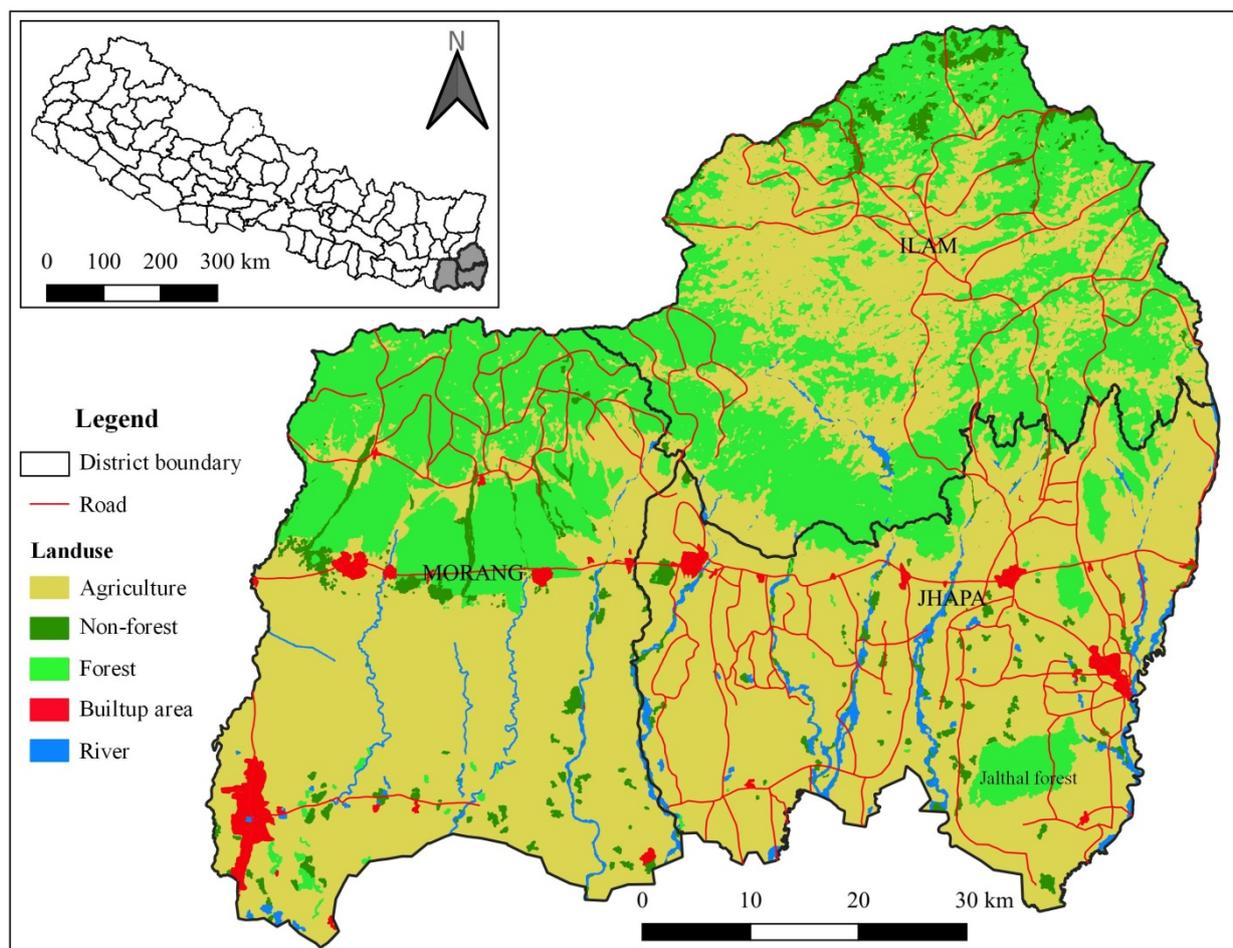
<sup>3</sup> Shrestha UB et al. 2010. Biodiversity conservation in community forests of Nepal: Rhetoric and reality. International Journal of Biodiversity and Conservation Vol. 2 (5): 98-104.

<sup>4</sup> Nepal Biodiversity Strategy and Action Plan (2014-2020). Government of Nepal.

<sup>5</sup> Bhattarai KR 2017. Enumeration of Flowering plants of Terai Sal forest of Jalthal, Eastern Nepal. J. Plant Res. 15(1): 14-20

4. To develop practical models of integrating biodiversity and forest-based enterprises for livelihood benefits of forest dependent poor and marginalised people.

This project is being implemented in Jalthal forest in Jhapa district. Jhapa district is located in the eastern lowland of Nepal and borders with India in the east and south (Figure 1). Jalthal forest is located in the lowest elevation point i. e. 60 meter above sea level (m.a.s.l.) in Nepal.



**Figure 1: Map of project site**

## 2. Project partnerships

ForestAction Nepal is the lead organisation and Federation of Community Forests Users Nepal (FECOFUN), Kathmandu Forest College (KAFCOL) and Division Forest Office Jhapa are collaborating institution from Nepal and RBGE is collaborating institution from the UK. ForestAction Nepal as the lead organisation has collaborated with project partners and other stakeholders. Principal investigator Dr Naya Sharma Paudel and Project Manager Dr Lila Nath Sharma regularly communicate with partners through phones, emails and zoom calls. Project activities are implemented jointly by collaborating institutions based on the nature of the task. In person meetings are organised with FECOFUN chair and DFO in Jhapa, while meetings with Principal of KAFCOL are organised in Kathmandu. Project activities are decided jointly. Communication with FECOFUN and DFO is mainly through telephone and in person meetings. Communication with RBGE is done through Skype, zoom and Facebook messenger. In this year a joint meeting of all partners could not be organised.

The project has also developed collaboration with experts from other research institutions in Nepal.. Nepal's known mycologist Dr Shiva Devkota from Global Institute for Interdisciplinary Studies (GIIS) Kathmandu, Mr Dhan Raj Kandel from Department of Plant resources and Ms Alina Ale from CTEVT visited Jalthal forest and helped in biodiversity assessment and knowledge sharing with the project team and local people (Doc-02).

### 3. Project progress

The project has made a good progress during its second year of implementation despite the COVID-19 pandemic. However, the pace of the progress is not similar across the outputs. The project has achieved more than expected in outputs 1 and 2, while it is satisfactory in output 3. For output 4 we need more time to see the results. Progress against each indicator is presented in the sections below.

#### 3.1 Progress in carrying out project Activities

##### **Output1: Forests are sustainably managed with greater diversity, enhanced structural complexity and improved productivity, and institutional capacity for biodiversity conservation enhanced**

Amidst the pandemic, we have completed most of the activities planned for the year. Progress against each activity has been presented below. The activities numbered in **bold** are followed by supporting documents. Some of the supporting documents have been already published, some are currently in draft version which will be published soon while others are just project report. Status of the supporting documents has been provided in Annex 4.

An interaction program was organised on July 16, 2020 at Durgabhitta community forest (CF) at Kachankawal Rural-municipality to review the past year achievements, and to plan for future activities. Following the government coronavirus guidelines, a meeting with a limited numbers of community leaders was organised (**1.1** Doc 01, 02). Forest transect walks (Doc 02) and participatory surveys were organised engaging local people and experts (**1.2, 1.3**, Doc 03). A total of 550 seedlings in two CFs of Jalthal were planted (**1.5**, Doc 04). Rescue and promotion of natural regeneration of 11,497 seedlings and 1260 saplings belonging to 58 different tree species from about 22 ha of forests were performed (Doc 04). The project also supported the local nursery for the production of saplings of local native tree species (**1.5**, Doc 02). A short and easy to understand knowledge document (in Nepali) on natural regeneration promotion, Mikania management and forest restoration (**1.5**, Doc 05) was prepared and disseminated.

The project supported revision of CFOP of Dashrathpur and Kalimandir CFs (**1.6**, Doc 29). The project also supported 6 CFUGs in preparation of their annual plan (**1.6**, Doc 02). These plans have focused activities on invasive species management and biodiversity conservation. Three hands-in practice training were organised for CFUG leaders which was attended by a total of 78 people (**1.6**, Doc-06).

A comprehensive forest biodiversity assessment was completed which engaged over 120 local people, some of them worked for more than a month (**1.7a**, Doc 03). Surveys on Ferns (Doc 07), Butterflies (Doc 08), Birds (Doc 09) and Flowering plants with a focus on tree flora (Doc 10) were completed. A Survey of mushrooms has been started (Doc 11). A M.Sc. student Mr. Pratik Pandeya from Agriculture and Forestry University is conducting a survey of mammals as part of his thesis and he is expected to complete field work by end of September 2021 (Doc 12). Two B.Sc. students (Jharana Ghimire and Aayoush Regmi) of KAFCOL submitted their thesis on September 2020 (**1.7a**, Doc 13a, b)

A workshop was organised and several meetings including transect walks were organised to prioritise plant species for conservation (**1.8**, Doc14, 02). Similarly, a workshop was organised to prioritise faunal species (**1.8**, Doc 15)

A draft of a booklet on 20 key plant species of Jalthal forest has been prepared and planned to be published by July 2021. (**1.9**, see sample pages Doc 16). A draft of biodiversity register of plants has been prepared (**1.10**, a sample page Doc 33).

An awareness program on forest fire was organised (31 a) and an audio message was broadcasted (Audio clip in Nepali, Doc 3b). Forest fire was often discussed in other programmes as well.

##### **Output 2 Mikania invasion substantially reduced and controlled, degraded forest areas and wetlands reclaimed and converted into productive systems through 'site management'**

Two major workshops were organised in project sites (Pathibhara Kalika and Durgabhitta CFs) on 26 and 27 November, 2020. CFUG leaders from 19 CFUGs participated in the program (2.2, Doc 02). Mikania removal activities were organised in all the 22 CFUGs. Alongside our support, CFUG members volunteered their time for cleaning operation. A total of 176 ha invaded forest area was cleaned during this year which involved over 10,000 man-days work (2.4, Doc 17). As part of biomass management of invasive species, compost production has been started in two CFUGs. This is expected to benefit more than 15 households. The compost will be ready to use by end of April 2021 (2.4, 2.7, Doc 18). An interaction program was organised on 2<sup>nd</sup> February, 2021 (World Wetlands day) to sensitise local government and other stakeholders to highlight the current status of wetlands in Jalthal forest. Similarly, a degraded (due to siltation) wetland (Jhilka Pokhari), was cleaned (2.5, Doc 02). Three CFUGs were supported for agroforestry in Mikania cleaned areas which will improve forest and sustain Mikania removal activities in long run (2.6., Doc 18). Three articles highlighting the biodiversity of Jalthal, have been published (2.8, Doc 19, 20, 21).

### **Output 3 Biodiversity conservation and values are appreciated and integrated into community forestry policy and planning process; communication materials highlighting biodiversity conservation prepared and disseminated for diverse stakeholders.**

We have drafted a manual to integrate biodiversity in CF planning and practice. This is under internal review. Once finalised, it will be shared with Department of Forest and Soil Conservation, DFO, FECOFUN and CFUGs (3.1, Doc 22). The Manual was piloted and a separate chapter on biodiversity management has already been incorporated in the recently revised CFOPs (Doc 02, 29). Three trainings were organised to CF leaders for the integration of biodiversity in CFOPs; a total of 78 people participated in the program (3.2, Doc-06). The national dialogue could not be organised this year due to the pandemic and planned for Y3 (3.3). Two popular articles were published: one on forest management and biodiversity concerns (3.6, Doc23), and another on the protection of natural regeneration (3.6, Doc24). Both of these articles discussed practical aspects of biodiversity conservation with existing policies and practices. A draft of a documentary has been prepared but needs more work before it can be finalised (3.7, Doc 32)

### **Output 4: Forest based enterprises including fishery and ecotourism facilities established and operationalized for enhancement of local livelihoods.**

We have identified a group poor women and planning on agroforestry and fisheries enterprises is underway (4.3, Doc 18). These women groups were supported to start agroforestry in three CFUGS (4.7, Doc 18). A brochure highlighting the importance of Jalthal forest has been prepared (4.5, Doc 21). This works as an extension material for promotion of tourism in the area. Similarly, trainings on compost production were organised for youths in four CFUGs (4.6, Doc 18).

## **3.2 Progress towards project Outputs**

As mentioned in previous sections and later in Annex 1, most of the activities which are planned for year 2 have been completed, and a few are on-going. In general, we think we are making a good progress towards the project outputs. Some activities especially the finalisation of drafts (proposed publications) are lagging behind as we could not conduct some field activities which were dependent on seasonality.

**Output 1:** The project has been able to conduct a comprehensive assessment of Jalthal biodiversity which is first of its kind carried outside the protected areas network in Nepal (Doc-27 based on Docs 7-11). The project has highlighted the importance of Jalthal forest and its biodiversity by documenting and disseminating its research findings through different media outlets (Doc 3, 19, 20, 21). The project has been able to aware community forest user group (CFUG) leaders and members about the key biodiversity issues of Jalthal forest by organising forest transect walks (Doc 02), workshops and trainings (Doc 06). We have been working with national and local media to sensitise different stakeholders on key issues in Jalthal forest conservation and to accelerate effective management (Doc 25, 37). We have introduced and conceptualised invasive species management and biodiversity conservation towards long term

restoration of forest (Doc 05). In general, our activities have initiated and laid the foundation for evidence-based management of Jalthal forest with biodiversity appreciated and conserved.

**Output 2:** We have worked at both the conceptual and operational level to contain the invasive species and restore the forest. At the conceptual level, we are helping local people to identify invasive species and their threat to the native population (Doc26, 34, 35). At the operational level, we are working with communities to control (removal and biomass management) the most prominent invasive species i.e. *Mikania micrantha*. Mikania removal has taken a form of a campaign involving large number of CFUGs with massive mobilisation of their volunteer time and efforts. A large number of seedlings and saplings of native trees have been rescued from Mikania infested 22 hectare areas (Doc 04, 17).

**Output 3:** We have started incorporating biodiversity conservation in forest management plans at local level by closely working with the communities. We have included biodiversity conservation related activities in operational plans (Doc29) and annual programs (Doc 02) of CFUGs. We have provided trainings to CFUG leaders and professional practitioners who are directly engaged in CFOP preparation (Doc 06). We have written and published several popular articles about the importance of biodiversity conservation in forest management with a specific focus on Jalthal forest (Doc19, 20, 22, 23). Our activities, in general, has helped in sensitising and building the capacity of stakeholders for effective management of forest for biodiversity conservation.

#### **Output 4: Forest based micro enterprises including ecotourism facilities established and operationalized for enhancement of local livelihoods.**

Upon understating and careful analysis of local conditions, we have initiated our major livelihood interventions. We have supported local people in fishery, agroforestry and compost production. All these activities are expected to generate income for the poor households and contribute towards the forest management (Doc18, 02). Agroforestry practices in degraded forest area are expected to improve degraded forest alongside income generation opportunities for locals. Publication and dissemination of Brochure has helped highlight Jalthal's nature and biodiversity that will encourage nature based tourism (Doc 21).

### **3.3 Progress towards the project Outcome**

Based on the activities completed during this year and achievements made so far, project partners are confident that we are in a good tract, and the project will result into all of its projected outcomes. Below we provide output wise descriptions of progress and its evidence.

The project has achieved some notable outputs in site level which are the foundation for sustainable management of Jalthal forest. The project has developed a scientific foundation on the importance, richness and uniqueness of the Jalthal forest, and biodiversity for evidence based management of forest (Doc 27, 21, 19). We have conceptualised and communicated invasive species as a major management challenge in Jalthal forest (Doc-17, 26). The CFUGs have started incorporating provisions on biodiversity conservation and invasive species management in their CFOPs and annual plans. There have been substantial changes in CFUG leaders' understanding of biodiversity and forest restoration. People have prioritised protection and natural regeneration as cost-effective and practical means of restoring forest against conventional plantation centric interventions (Doc 04, 05, 17).

### **3.4 Monitoring of assumptions**

**Assumption 1:** CFUGs and stakeholders acknowledge *Mikania* invasion as a major problem.

**Comments:** Yes, CFUGs and stakeholders agreed that it is a serious problem (Doc 17, 05).

**Assumption 2:** There will be broader political support in Jalthal forest management and restoration programmes. **Comment:** There is consensus among different stakeholders but it has not been fully translated in their actions (Doc 02).

**Assumption 3:** Local governments also develop plans for tourism development and livelihood support in Jalthal area. **Comment:** Local government have policies and programmes but these are yet to be implemented on the ground.

**Assumption 4:** *Mikania* spread can be controlled through site management and new entry will be early detected and controlled. **Comment:** This holds true but intensive site management seems very costly with voluminous labour requirement.

**Assumption 5:** Policy/decision makers in the Ministry of Forest in federal and provincial government cooperate. **Comment:** Forest policy 2015 and Federal Forest Act 2019 have supportive provisions on forest restoration, biodiversity conservation and invasive species management. We have also received good support from the provincial government. A team led by Provincial Forest Secretary visited the project site. The project team visited Mr Secretary in his office at the Provincial Ministry in Biratnagar in March 2021.

**Assumption 6:** Human wildlife (particularly Elephant) conflict minimised: **Comment:** Yes, after solar fencing construction by the Ministry of Forest and Environment, the conflict has been reduced in the project site.

**Assumption 7:** CFUGs participate in bush cleaning for dual purpose 1) bush cleaning as part of their regular job and 2) Incentives for bush cleaning to CFUGs. **Comment:** Yes, this holds true. There was good cooperation from the CFUGs and they have upgraded *Mikania* cleaning as a widespread campaign.

### **3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation**

The project's anticipated impacts include long term restoration of Jalthal forest and conservation of its biodiversity, integration of biodiversity in community forestry related policies and plans, and control of invasive species particularly, *Mikania*. The project has made notable progress in its activities that can be a solid foundation towards these long term impacts.

Through several inventories and participatory surveys, the project has identified key biodiversity components, highlighted the ecological significance of the forest and the results are communicated through diverse communication materials thereby, creating a local and national debate about the conservation need of Jalthal forest (Doc 20, 21, 27, 28). Local youths and CFUG leaders are aware of the importance and uniqueness of Jalthal biodiversity and they have gained capacity for monitoring forest condition and the state of biodiversity (Doc 03, 05). Invasive species management has been considered as an important agenda and placed in the long term perspective of forest restoration (Doc 17, 26). CFUG leaders were provided with training so that they can contribute to integrating biodiversity in forest management plans (Doc 06) and amended forest operational plans have biodiversity chapters which have impacts in long term (Doc 29).

The project has initiated activities that have directly or indirectly helped poor people generate income from forest management and forest based enterprises. Local youths, especially from poor households enjoyed employment opportunity during *Mikania* removal campaign. They will get more of such opportunities next year as CFUGs are planning to invest their own revenue in it (Doc 02). This year alone more than 1200 man days got benefited from cash income of daily wages (Doc 17). More than 120 people got benefited from forest survey (Doc 03). Project has initiated compost production in four community forests and agroforestry in three CFUGs (Doc 18); both of these activities will help in long term benefit for local income from improved forestry and agricultural activities.

## **4. Contribution to the Global Goals for Sustainable Development (SDGs)**

Projects actions related to invasive species management, agroforestry, forest restoration and biodiversity conservation directly contribute towards multiple targets of UN SDGs.

The project has initiated sustainable and evidence-based forest management with aim of ensuring the conservation and enhance of biodiversity of Jalthal forest. The project has already started the restoration of degraded forest and wetlands (Doc 05, 17). The project is supporting natural regeneration and plantation of native species (Doc 04). These activities contribute towards target 15.1 and 15.2 of the SDGs.

Similarly, the project has identified and started working to reduce existing and potential threats to biodiversity conservation. Such threats include the unsustainable harvest of natural resources, forest fire, poaching of wildlife and *Mikania* invasion. These activities will contribute towards Target 15.5 of the SDGs.

The project has initiated controlling Invasive alien plant species (IAPS) with long term objectives of forest restoration by engaging local people (Doc17, 05). This activity is aligned with target 15.8.

Similarly, we started integrating biodiversity values in the community forestry planning process (Doc 02, 06, 29) which will help towards meeting the targets of government policies on biodiversity conservation and will contribute towards target 15.9 of the SDGs. Improved forest conservation will also contribute to climate change mitigation (SDG 13).

The project has supported income generating activities like agroforestry and composting by engaging rural poor communities, including members of the marginalised and disadvantaged group (Doc 18). These activities will contribute towards SDG Goal 1 and 2 (Target 2.4).

## 5. Project support to the Conventions, Treaties or Agreements

Project activities during year 2 supported multiple articles of CBD (primarily article 7 and 8), Aichi Biodiversity targets and objectives of Ramsar convention.

### Activities relevant to CBD:

**Article 7 (a). Identification of component of biodiversity and their monitoring.** Jalthal forest is a biodiversity rich remnant forest but the overall facet of biodiversity has not been well explored and documented. The project has worked to identify, appreciate and document the biodiversity and associated ecosystem services through participatory approaches; engaging both experts and local people (Doc 03, 07, 08, 09, 10). The project has also identified the threats to biodiversity and communicated it to local communities, stakeholders and policy makers from local to national levels (Doc 20).

**Article 8 (c, d, e).** The project has started integrating biodiversity conservation in community forestry policy and planning process including ecosystem restoration and invasive species control. This will help to enhance biodiversity management across the CF, beyond protected areas (Doc-06, 29). The project has prioritised species for conservation which will help to maintain the population of rare, threatened and locally overexploited species (Doc-14). Conservation activities outside the protected areas will indeed help on providing alternative habitats for wildlife.

**Article 8 (f) Rehabilitate and restore...strategies.** The project has conducted activities like plantation, weed control and site management that lead towards the restoration of degraded forest. These activities will support this article of CBD (Doc-04, 05).

**Article 8(h)** One of the serious threats to the Jalthal forest is **invasive alien species** particularly *Mikania micrantha*. Activities have been carried out to control invasive species through site management (Doc-17).

The project activities are aligned with multiple targets of **CBD** strategic targets, mainly **Aichi Biodiversity Targets (ABT)**. Awareness raising and capacity building for biodiversity conservation through local actions in Jalthal serve to the **Target 1** (Doc- 03, 14); mainstreaming

biodiversity conservation in Nepal's CF process is aligned with **Target 2** (Doc-06, 29); sustainable management of forests is directly related to **Target 7**. Similarly project will work to control and eradicate invasive species - *Mikania* and other species from the site (Target 9, Doc-17, 04) and ecosystem restoration (Target 14, Doc-02).

This project activity directly addresses the objectives of **Ramsar Convention**, as one of the major areas of our site-specific action will involve improved management and wise use of degraded wetlands within Jalthal forest (Doc-02). The wetlands in this area are habitats for breeding as well as migratory birds. Project activities to restore wetlands directly serve to achieve strategic goals particularly Goal 3 target 12 and 13 of the fourth Ramsar strategic plans of 2016-2024<sup>6</sup> (Doc-02).

## 6. Project support to poverty alleviation

The project's main beneficiaries are local communities around Jalthal forest, particularly the poor and marginalised ones. The project has initiated activities that will help to improve the livelihoods of these people by improving their resource based and through forest based enterprises.

Compost production from forest biomass is an important intervention; a total of 15 households will be benefitted. Over 20 metric tons of compost is expected to be produced by the end of May 2021. This will generate over 200,000 NPR (ca. £1320) (Doc 18).

The project has also initiated agroforestry with the dual aim of sustaining Mikania removal activities and income generation through low cost inputs. The project has provided technical support and turmeric seeds for plantation in three CFUGs. This is expected to benefit 125 households (Doc 18).

The project has supported CFUGs in Mikania cleaning activities. This year over 1000 local people were engaged as wage labour (Doc 17). Similarly, over 100 local people were paid while surveying the forest (Doc 03).

Projects support in forest restoration will bring benefit to local people by making forest resources and fodder more abundant and accessible.

## 7. Consideration of gender equality issues

ForestAction Nepal and partner organisations have gender equality as a core value, and we actively encourage women as active agent and beneficiaries of the project. Gender considerations are made during programme design, forming the team and targeting field actions. Following strategies have been adopted in the project with some specific activities during year 2.

- We have a balanced field team – a) forester male and b) social mobiliser female (Ms Devika Adhikari)
- To maintain gender balance in our workforce, we have hired a women (Mrs. Jamuna Paudel) in supporting out publication and communication.
- Kathmandu Forestry College (KAFCOL) has selected women (Ms Aarati Budhathoki) for M.Sc. thesis who will be supported by the project and will be working in Jalthal.
- While designing livelihoods interventions, the project has supported women-led enterprise development. So, far three agroforestry intervention initiated this year are implemented exclusively by women members (Doc-18)
- We have set a strong women friendly criteria along with other inclusive criteria to engage in and benefit from field activities. When participants are invited from CFUG,

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<sup>6</sup> Ramsar Convention Secretariat, 2016. The Fourth Ramsar Strategic Plan 2016–2024. Ramsar handbooks for the wise use of wetlands, 5th edition, vol. 2. Ramsar Convention Secretariat, Gland, Switzerland

there must be 50% women, along with other criteria – indigenous people, poor and vulnerable, forest dependent etc. So far, 29 women trained in forest operational plan and biodiversity inventory-related training this year (Doc 06)

- We support our staffs' capacity development and leadership. Ms Devika Adhikari joined a training on forest plants seed collection and we have encouraged her to write articles in local newspapers and she wrote one and managed to publish (Doc 37)
- We prioritise women's convenience and create environment favourable to them during designing and organising workshop/meeting/training. For example, we mobilise women facilitators, use vernacular language (Nepali and local language), convenient venue (centre of village), timing (between 10am and 3:30pm) so that they can effectively participate and benefit.

## **8. Monitoring and evaluation**

- ForestAction as the lead partner conducts regular monitoring and evaluation against the set targets and indicators. We take an adaptive process, project indicators will be closely monitored, and strategies will be prepared for maximum possible achievement. The project manager reports to PI and CoPIs and is responsible to implement the day-to-day activities.
- The project leader, administrative head of and project manager meet and discuss regularly at ForestAction Nepal to monitor project updates and check if milestones are achieved. The project manager regularly visits the field to conduct and monitor the field activities.
- As per the Government of Nepal's requirement, we regularly provide updates to Social Welfare Council (SWC) and District Administration. At ForestAction, for accounting and administrative purpose, the brief report on the achievement after each fieldwork is presented.
- We have collected baseline data before intervention, results of intervention will be recorded to monitor and assess the changes.

## **9. Lessons learnt**

- The implementation of project activities from field office by local staffs worked well during the time of pandemic. This approach helped us to maintain a regular dialogue with the target local communities. Regular availability of project staff at the field office was much convenient to CFUGs and other stakeholders. For example, our field officer helped the local government to prepare technical proposals.
- Given the nature and extent of the problem of invasive species management and forest restoration, we feel that our plan to cover a large area appear ambitious. We realised that the more focused intervention in few/smaller groups would give more solid results.
- Based on the biodiversity data and learning from small scale interventions, we have identified future actions. For example, we have identified several rare and small populations of plant species (less than 10 mature individuals in the forest). There is need for concrete action for the conservation of these small population species.
- Working with communities in complex process. They have their own governance and organisational structures. We as an external agency cannot dictate and control their governance. Sometimes, we realised that their governance process does not meet our expectations. In some cases, they practice sub-standard practices, especially in relation to financial governance. We therefore need to be careful in designing activities in which we provide direct cash funds to communities. This is not a general problem but with some of the CFUGs.
- We learnt that changing local practice takes time. While cleaning a degraded wetland we tried to use labour but it was not easy using labour as use of excavator is easy job.

Similarly we tried to focus on natural regeneration protection in forest but there was still interest in plantation.

## **10. Actions taken in response to previous reviews (if applicable)**

In Y1 report, reviewers had some suggestions and addressed these concerns in this report.

**Abundance in the biodiversity assessment:** Considering reviewers suggestions, we have surveyed the forest so that we will get a fine level abundance data of the trees and other plant species (Doc 03). We have also considered this question during our survey of mammal. Both of these surveys are completed and need time for data cleaning and will be included in next year report. Report on survey of Birds now includes an abundance data.

**Plantation and restoration:** Last year, we did not have much control on the choice of species. After some CFUGs plantation, we realised the mistake. We immediately started discouraging plantation of exotic species in the forest. Later DFO supported our campaign. For restoration, we promote natural regeneration. Native species were planted only in sites with no regeneration potential. Rather than clearing the whole land, we have encouraged CFUGs to protect the natural regeneration from Mikania infestation.

**Planted species and seedlings:** Reviewers suggested to list the species and their number. We have addressed this in this year's report.

## **11. Other comments on progress not covered elsewhere**

This year we have focussed on writing in Nepali for awareness raising and sensitising stakeholders (Doc 40). We highlighted importance of Jalthal biodiversity and its uniqueness in Nepalese context. About a dozen of communication materials have been published in Nepali language. We wrote more than we thought. As our primary stakeholders are local people and they read in Nepali so we thought its important to write in Nepali. This is not only beneficial to locals but also increases our accountability towards local communities.

## **12. Sustainability and legacy**

CFOPs have been revised with invasive species and biodiversity component. These will be for five years i. e. they will be active more than 3 years after the project. Mikania management has now been placed in long term perspective of forest management this will also keep projects legacy. Local people and stakeholders are repeatedly requesting us to produce biodiversity profile of the forest in Nepali language this shows their interest towards forest. We have connected Mikania removal with income generation by making compost and initiating agroforestry. This will help sustaining project intervention even after the project life. CFUGs and DFO now agree to not to introduce exotic trees in forest this is also an important legacy of the project.

## **13. Darwin identity**

- This is a standalone project funded by Darwin Initiative UK and the project has clear aim and objectives. This information has been maintained this in all our activities. Researchers especially botanists, ecologists and wildlife biologist, stakeholders related to forest and invasive species, CFUG leaders and local governments are aware of the project and its source of funding. Local journalists are also aware of the project and DI.
- We have used Darwin Initiative logos in all the public documents, hoarding boards and awareness raising materials (Doc-30).

- If logos are not used, we have indicated that the work was supported by Darwin Initiative UK.
- We have mentioned DI in all formal communications, for example, invitation letter to the participants and guests.
- Project activities and awareness raising contents have been posted in the projects Facebook page. As local people are the main target and viewer of the page, we post the content in the Nepali language. The page is popular and working well. Darwin Initiative identity has been maintained in the page as a funding agency.
- We have informed authorities (federal government and local governments) about the funding source i. e. Darwin Initiative. In a presentation in Kathmandu, we had the opportunity to explain DI's funding areas while responding to a government officer's questions about the nature of funding of DI.
- In all the presentations made by project staffs, DI logo has been used on the cover (front) page of the presentation. We have presented various aspects of the project with federal, provincial and local governments.
- We have recently submitted two journal articles (Doc 38a, b) that acknowledges the Darwin funded project, and the same will be followed in future publications.
- Projects twitter account now has been linked with Darwin Initiative Twitter handle. We mention DI in each tweet.

#### **14. Impact of COVID-19 on project delivery**

The project was impacted by Covid-19 global pandemics. There was a nationwide lockdown from mid-march to August 2020. Following were the main impact of Covid on our project.

- The project manager who is responsible for project implementation and coordination could not travel to the field until November 2020.
- RBGE experts' plan to visit the project site for field work could not be materialised in 2020.
- Some of the activities especially floral inventory and inventory of herpetofauna could not be completed.
- CFUGs could not collect forest product especially timber. The sale of timber is the main source of income of CFUGs. CFUGs could not invest as planned in forest management related activities.
- Some publications which dependent on inventory could not be published.
- The project meeting with more people could not be organised due covid induced restrictions

We tried to mitigate the effects to some extent by adopting the following:

- Despite pandemics, we made satisfactory progress in field activities. This is mainly due to the presence of field office in Jalthal. In addition we have hired local staff who could conduct activities even during the pandemic.
- For our field activities, we adopted SSS (small, scattered and several) strategies against a single and big event. For example, one big event which was supposed to be organised in a single location was split into four small events and were organised at the convenient location of participants. This allowed us to conduct activities while following covid-19 safety guidelines of local personalities.
- ForestAction Nepal itself also developed a safety protocol for field activities.
- We did remote supervision to our field staffs through telephone, zoom meeting, Skype and messenger. The same method was used to discuss/communicate with partners.

## 15. Safeguarding

Please tick this box if any safeguarding or human rights violations have occurred during this financial year.

If you have ticked the box, please ensure these are reported to [ODA.safeguarding@defra.gov.uk](mailto:ODA.safeguarding@defra.gov.uk) as indicated in the T&Cs.

ForestAction has written policy to administer project staffs which has no tolerance to any form of discrimination based on gender, religion, ethnicity and race. Sexual harassment is not acceptable. We are committed that no person will be employed without paying. All people engaged in our work will be paid according to national laws and local practices. All local people attending our meetings and trainings will get their transportation cost compensated. We respect to and comply with host and funding country's laws to implement the project.

We are committed to conduct work in safe environment. Work inside forest is usually done in group so that threat of wildlife is minimized. Other safety measures are ensured while working inside forest.

As the project's major engagements are with natural environment, we, therefore are committed towards not harming the natural environment. We have a strategy of discouraging introduced species plantation in the forest. We will adopt actions to promote natural regeneration during bush cleaning and Mikania removal. We will not introduce any invasive species in the forest and outside; this is particularly relevant while selecting fodder and NTFP species for plantation. Our experiments inside forest will not have short term or long term negative impacts to forest wildlife and dependent rural population.

## 16. Project expenditure

**Table 1: Project expenditure during the reporting period (1 April 2020 – 31 March 2021)**

Project spend (indicative) since last annual report	2020/21 Grant (£)	2020/21 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				
<b>TOTAL (After revised)</b>				
<b>Original</b>				

Note: Through change request it was agreed that GBP [redacted] transfer to year 3 (Travel and subsistence [redacted] + Operating Cost [redacted] [redacted])

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2020-2021

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p><b>Impact</b></p> <p><b>Biodiversity conservation mainstreamed in CF policies and practices, biodiversity in CFs enhanced, forest and wetlands are restored and local people benefit through forest-based enterprise including ecotourism and fisheries</b></p>		<p>Project has been successful in highlighting the ecological importance, richness and uniqueness of the Jalthal forest as an important site outside the protected area (Doc-20, 25). This has formed a foundation for the conservation and restoration of the forest (Doc-26). CF plans and annual programs have been revised and updated with biodiversity (Doc-29). Agroforestry and invasive species biomass management have been initiated will have economic benefits to rural poor (Doc-18).</p>	<ul style="list-style-type: none"> <li>• A separate biodiversity management chapter in each newly formed CFOPs.</li> <li>• Production and distribution of 10,000 plus fodder seedlings</li> <li>• National level policy dialogue</li> <li>• Plantations of bamboo culms inside the core area and along elephant corridor.</li> <li>• Eco-tourism promotion facilities will be initiated.</li> </ul>
<p><b>Outcome</b></p> <p>Jalthal biodiversity and ecosystems are restored with significant livelihood benefits and biodiversity conservation is mainstreamed in National CF policies and plans</p>	<p>0.1 22 CFUGs (representing more than 80,000 people) and 5000 local people (CFUG members), of which 50% are women, directly engaged in sustainable forest management activities by end of Year 3.</p> <p>0.2 22 Community Forest Operational Plans (CFOPs) revised with a separate biodiversity section by the end of Year 3.</p> <p>0.3 At least 100 foresters and CFUG leaders (40% women) trained to mainstream overall biodiversity conservation in CFOP by end of year 2.</p> <p>0.4 Jalthal biodiversity assessed and detailed photographic profiles of 40 ( 20 floral and 20 faunal) species prioritised for conservation prepared and communicated through printed booklets (1000 copies) and</p>	<p>0.1 Over 10,000 local people were engaged primarily in invasive species management (Doc-17) and other activities in Jalthal (Doc- 02).</p> <p>0.2 Six annual plans and two CFOPs have been revised with biodiversity as a separate chapter, two CFOPs on the way of approval (Doc-02, Doc-29).</p> <p>03. 78 people (of which 37% were female) got training on CFOP and biodiversity (Doc 06).</p> <p>04. Jalthal biodiversity assessed for ferns, flowering plants with focus on trees, mushrooms, butterflies and birds (Doc-7-11). 20 plant species prioritised for conservation</p>	<p>(Highlight key actions planned for next period)</p> <ul style="list-style-type: none"> <li>• <i>Mikania</i> removal and plantation will be continued in year 3 (2021/2022)</li> <li>• More CFOPs will be renewed or revised with biodiversity provision.</li> <li>• Preparation Jalthal Biodiversity register and Jalthal biodiversity profile continues</li> <li>• Mammal and mushroom survey will be conducted in year 3</li> <li>• Plantation of fodder trees in forest and private land will be carried out</li> </ul>

	<p>three field education programs organised for awareness building and biodiversity identification by end of year 3.</p> <p>0.5 Mikania cover in the Jalthal forest reduced by 80% (ca 1500 ha land cleared) which have direct positive effect on regeneration and conservation of native flora and associated faunal species on those sites by end of the project. Satellite population controlled/destroyed in adjoining areas by the end of project.</p> <p>0.6 Tree regeneration density (seedling density and sapling ) increased by 10 % by end of the of the project in response to land restoration and protection measures adopted.</p> <p>0.7 Five native NTFPs species including bamboo and rattans selected and used to establish forest based enterprise by end of year 3.</p> <p>0.8 Agroforestry including shade crops, NTFPs generates income for 100 poor households through women groups and contributes in Mikania control by end of year 4.</p> <p>0.9 50 poor households from indigenous and <i>Dalit</i> community benefit from fisheries (with native fish species) in two restored wetlands by end of year 3.</p> <p>0.10 Tourism facilities (information centre, nature guides, brochure) established and 30 local people including 15 women get trainings for tourism enterprise and 15 of them are supported for enterprise development by end of year 3.</p> <p>0.11 Provisions for biodiversity conservation integrated in National CF</p>	<p>(Doc-14) has been prepared and draft of booklet prepared (Doc-16).</p> <p>05. A total of 176 hectare of forest was cleared (Doc-17) (We have realised that 80% target is too ambitious).</p> <p>06. Tree regeneration density has been protected and over 45000 natural regeneration (seedlings and saplings) protected.</p> <p>08. Agroforestry initiated in three CFUGs and 126 women members are actively engaged in the activity (Doc-18).</p> <p>09. 34 women members are supported in fisheries (Doc-18).</p> <p>10. A brochure highlighting Jalthal forest has been prepared (Doc-21). Similarly, project Facebook page is also reaching to wider audience.</p>	<p>with more than 10,000 seedlings to be planted in year 3.</p> <ul style="list-style-type: none"> <li>• Two women group engaging 40 poor and marginalised women will be formed</li> <li>• Women groups will be provided with skill development training and seed fund for small scale enterprise.</li> <li>• A national dialogue on biodiversity conservation in community forest will be organised.</li> <li>• Compost production using invasive species will be continued.</li> <li>• Analysis of survey data and at least two manuscript will be submitted in peer reviewed journals.</li> </ul>
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	Guidelines by end of the project.		
<p><b>Output 1. Forests are sustainably managed with greater diversity, enhanced structural complexity and improved productivity, and institutional capacity for biodiversity conservation enhanced</b></p> <p>CFOP: Community Forest Operational Plans are approved documents guiding forest management, product harvest silviculture and forest conservation.</p>	<p>1.1 Participatory biodiversity assessment conducted, 22 members from CFUG and local, national and international experts/ technicians (Forester, ecologist/ botanist and wildlife biologist) engaged in the assessment and forest biodiversity profile prepared by the end of year 3.</p> <p>1.2 Two trainings on forest biodiversity management (including key attributes and habitat trees) organized in Year 1, 66 people trained from 22 CFUGSs</p> <p>1.3 22 CFOP revised and implemented by end of year 3 to incorporate overall biodiversity conservation strategy, approaches and tools by CFs</p> <p>1.4 5,000 bamboo culms planted in forest and private lands, rattan pocket areas identified, and managed by the end of year 2</p> <p>1.5 At least 30,000 native fodder trees in CF and private lands planted by the end of project</p> <p>1.6 Rare, threatened, endangered and unique species and vulnerable ecosystems identified and protection measures are included in CFOP by end of year 3.</p> <p>1.7 Species profiles for 40 species (20</p>	<p><i>(Report general progress against indicators, comment on their appropriateness, and reference where evidence is provided e.g. Evidence provided in section 3.2 of report and Annex X)</i></p> <p>1.1 Several transect walks, informal discussions and participatory surveys were conducted and reports prepared and some of them published (which resulted in peer reviewed article, blogs, leaflets, photo collection etc (Doc-03, 07-11).</p> <p>1.2. Three trainings were organised in year two engaging 78 local people (Doc-06).</p> <p>1.3 So far two CFOPs were revised, two in process of approval and six annual plans were prepared integrating biodiversity issues specific to Jalthal (Doc-29, 02).</p> <p>1.4. CFUGs agreed to plant bamboo.</p> <p>1.5. We have so far planted 550 seedlings in two CFS and rescued above 10000 seedlings and saplings instead of plantation (Doc-04).</p> <p>1.6. Rare and threatened flora identified through fieldwork and surveys (Doc-16) and in next stage we will make plans in year 3.</p> <p>1.7 20 Floral species have been identified and booklet draft is in progress (Doc-16). Faunal species have been identified through workshop (Doc-15).</p> <p>1.9. Checklist of Jalthal flora has been prepared (Doc-10).</p> <p>1.10. We worked with communities to rescue natural regeneration in two stage one during monsoon (Doc-04) and one during Mikania cleaning (Doc-17) this will contribute towards this.</p> <p>1.11 Background data for this (profile) completed, and the document will be prepared as demanded by local communities.</p>	

	<p>floral and 20 faunal including birds) species prioritised for conservation prepared and disseminated in project sites by end of Year 2.</p> <p>1.8 Jalthal Biodiversity register as envisioned by Nepal Biodiversity Strategy and Action Plan (NBSAP 2014-2020) prepared and maintained by mid of year 3.</p> <p>1.9 Checklist of all plant species in Jalthal forest prepared by end of year 2.</p> <p>1.10 Tree regeneration density, seedling and sapling density increased by 10% and 5% respectively by end of the project.</p> <p>1.11 Prepare and publish a comprehensive account of Biodiversity of Jalthal forest in Nepali (500 copies) and English (pdf file) language by end of year 4 [This document expected by local people and stakeholders]</p>		
<p>Activity 1.1 <a href="#">Insert activities relevant to this Output</a></p> <p>1.1 Organize planning workshops cum interaction program with local stakeholders at project site</p>	<p>An inception meeting was organised with CFUG leaders on 16 July 2020 (Doc-01).</p>	<p>Small planning workshop will be organised depending on Covid situation</p>	
<p>1.2 Organize 'Field education program' for local people to demonstrate and identify key species, habitat and traditional Ecological knowledge associated with bio resources</p>	<p>Several transect walks, one detail survey and three expert visits were organised (Doc -02, 03, 14)</p>	<p>Interaction with CFUG memebrs based on collected data. RBGE experts will travel to Nepal</p>	
<p>1.3 Hold meetings with CFUGs to complement the field education programs to identify key biodiversity, rare and threatened species and traditional ways of management</p>	<p>Its complimentary to activity 1.2</p>		
<p>1.4 Organize trainings to CFUG leaders to conceptualise them overall biodiversity, ecological uniqueness and significance of Jalthal, and</p>	<p>Three trainings were organised CFUG leaders to conceptualise</p>	<p>We met target. One small and focussed training may be organised</p>	

bringing biodiversity to CF process		them biodiversity issues in CFOP (Doc-06)	
1.5 Support CFUGs in plantation of bamboo culms and other fast growing native fodder species		More than 10,000 seedlings of fodder species are being produced in coordination with a CFUG nursery.	Bamboo plantation will be done this year with fodder species distributed to community.
1.6 Work with CFUGs to revise and renew the forest operational plans considering key attributes of forest biodiversity		Two CFUGs OPs have been revised, two in phase of approval and six annual plans prepared (Doc-06, 29)	This will be continued, more support will be provided to CFUGs to revise more.
1.7a Conduct participatory biodiversity assessment of Jalthal forest bringing experts and local people together and maintain database, support KAFCOL master students in thesis on Jalthal biodiversity, management options and human nature interaction		Survey was conducted engaging more than 100 local people and several experts (Doc-03, 02). Two MSc students selected for thesis in Jalthal	Thesis support completed, we expect student to defend thesis now.
1.7b. Organise RBGE field expedition, collect plant specimen, identify and compare their (selected and prioritised species) biogeography based on National and International herbarium and plant data base		RBGE could not make their travel but they remotely supervised MSc student collected specimens. We are working with RBGE to prepare.	RBGE experts will travel as situation improves.
1.8 Species are prioritised for conservation using local and expert knowledge coupled with biological data		Two workshop one each for flora and fauna organised (Doc-14, 15)	Task completed
1.9 Prepare and publish booklet containing profile of species prioritised for conservation		Fieldwork and workshops completed and the draft is in progress (Doc-16)	Polishing the draft and finalising
1.10 Prepare Jalthal biodiversity register and keep the register in relevant locations		Register draft has been prepared (See sample page Doc 33)	Polishing the draft and publishing
1.11 Organize programs for forest fire, poaching control and conservation of threatened and rare species (in collaboration with DFO, FECOFUN and Local Governments)		DFO office organised activity against forest fire (Doc -31)	Awareness program will be organised at CFUG level.
<b>Output 2. Mikania invasion including satellite populations substantially reduced and</b>	2.2 Participatory Mikania management and control plan for Jalthal prepared by third quarter of year 1 2.3 Bilingual (Nepali/local and English)	2.2 We have prepared, published and disseminated a leaflet that suggests the most practical methods for Mikania management in Jalthal (Doc-05)	

<p><b>controlled, degraded forest areas and wetlands reclaimed and converted into productive systems through 'integrated site management'</b></p>	<p>colour booklet (1000 copies) on Invasive Alien Species (IAS) of Jalthal forest prepared and distributed By end of year 2</p> <p>2.4 Mega campaign for <i>Mikania</i> control organized annually (ca 10,000 man-days workers involved altogether) to control <i>Mikania</i> in the forest; satellite populations around the forest are also destroyed by end of year 3.</p> <p>2.5 <i>Mikania</i> cover in the Jalthal forest reduced by 80% (ca 1500 ha land cleared) by the end of year 3</p> <p>2.6 Existing and potential use of <i>Mikania</i> identified , promoted and communicated ( roughly 5 metric tons of <i>Mikania</i> biomass turned into compost and bio-gas) by end of the project</p> <p>2.7 Two of the largest wetlands in the Jalthal forest restored by removing <i>Mikania</i> and controlling siltation by end of year 3.</p>	<p>2.3 RBGE is preparing the bilingual book (Sample pages, Doc-36)</p> <p>2.4 176 hectare of infested land cleared as a campaign which engaged 10,000 man days equivalent work (Doc-17).</p> <p>2.5 Project has worked towards this (Doc-05, 17, 26)</p> <p>2.6. Compost production using invasive species has been initiated over 20 metric tons of compost will be produced (Doc-18)</p> <p>2.7. Restoration of ecologically important wetland (Jhilka pokhari) continued (Doc-02)</p>	
<p><b>Activities relevant to the output</b></p> <p>2.1 Carryout <i>Mikania</i> cover assessment using remote sensing and ground trothing tools (it serves as baseline data as well) and carryout endline data collection</p>	<p>Year 1 completed, so far no specific activity in this year.</p>	<p>Final assessment will be conducted in year 4</p>	
<p>2.2 Organize workshop with local stakeholders to prepare strategies and plans for <i>Mikania</i> control</p>	<p>Two workshops were organized on Nov 26 and 27 2020 (Doc-02)</p>	<p>Small meetings will be organised rather than single workshop</p>	
<p>2.3 Campaign and conduct activities for <i>Mikania</i> clearance in forests in wider stakeholders participation including local government representative, use extra labour and provide cash or gift for contribution</p>	<p>All 22 CFUGs conducted their activities (Doc-17)</p>	<p>This activity will be carried out in few most problematic sites</p>	
<p>2.4 Identify and promote technologies to use <i>Mikania</i> biomass (Support local farmers to make compost and bio-gas out of <i>Mikania</i> weeds)</p>	<p>Compost production was selected and supported in four CFUGs. Bio gas may theoretically feasible but not practical.</p>	<p>Compost production will be continued.</p>	
<p>2.5 Undertake programs to restore water in collaboration with local governments and CFUGs</p>	<p>A CFUG was supported and discussions were organized with local governments (Doc 02)</p>		

2.6 Integrate shade crops and fodder trees in Mikania cleared areas with Mikania control program	Agroforestry has been initiated in three CFUGs (turmeric plantation in cleared areas) (Doc-18)	Local communities will continue
2.7 Work with local farmers, CFUG members and municipalities to remove satellite population of Mikania	This activity was integrated with 2.2 and 2.3	
2.8 Prepare publish and disseminate factsheets of Jalthal Biodiversity (Status, threats, values and conservation)	A broacher (Doc-21) in English has been prepared, similarly a blog (Doc-19) in English and an article (Doc-20) in Nepali highlighting status, threat and values published.	
2.9 Prepare and publish a detail profile of Jalthal Biodiversity in Nepali language	Background data collection completed the document will be ready by end of Year 3.	
<b>Output 3. Biodiversity conservation and values are appreciated and integrated into community forestry policy and planning process; communication/awareness raising materials highlighting biodiversity conservation prepared and disseminated for diverse stakeholders</b>	<p>3.1 <i>Gaps and opportunities of biodiversity conservation in CF identified through detail review of selected 50 CFOPs in year 1.</i></p> <p>3.2 <i>A manual for integrating biodiversity in CFOP developed for facilitators/practitioners by end of year 1.</i></p> <p>3.3 <i>20 practitioners/facilitators (Government officers) are trained on biodiversity integration in CFOP in year 1.</i></p> <p>3.4 <i>National level stakeholders (n=60) sensitised and informed on biodiversity integration in CF policy and practice by end of the project</i></p> <p>3.5 <i>Challenges and opportunities for mainstreaming biodiversity conservation in CF highlighted through a policy brief (500 copies) in year 3.</i></p> <p>3.6 <i>Wider audience informed on importance of biodiversity and its conservation measures through at least</i></p>	<p>3.1 Activity completed in year 1.</p> <p>3.2 Draft has been prepared in Nepali language (Doc 22) and will be finalised before July 2021.</p> <p>3.3 Completed in year 1.</p> <p>3.4 Planned for year 3 and 4.</p> <p>3.5. Year 3 Activity</p> <p>3.6. Three articles published in Nepali leading online sites (Doc 20, 23) and one in both print and online (Doc 24)</p> <p>3.7. Documentary A preliminary draft version of the documentary prepared (Doc 32) and finalised in year 3</p>

	<p><i>three newspaper articles on national dailies (One each in Year 1, 2 and 3).</i></p> <p><i>3.7 A documentary on good practice linking biodiversity conservation and livelihood produced and disseminated by end of year 2.</i></p>	
<b>Activities</b>		
3.1 Develop a manual on integrating overall biodiversity conservation in CF planning and process	A draft of this document in Nepali is ready (Doc 22).	Will be finalised and shared to stakeholders within Q1 of year 3.
3.2 Hold training to CFOP practitioners on values of biodiversity and ways of integrating it into CFOPs	Three trainings were organised at local level (Doc 06)	
3.3 Organize a national dialogue with national level stakeholders on biodiversity mainstreaming in CF planning and process	In year 2 the time window for this was very short so we shifted it.	It will be organised in year 3.
3.4 Prepare, publish and disseminate a policy brief on biodiversity conservation with respect to CF		Activity for year 3 and 4.
3.5 Publish a peer reviewed article based on review of CFOPs to highlight gaps and opportunities of biodiversity conservation in CFs	Review completed but not the MS	Project team agreed to submit an article in Journal of forest and livelihood by August 2021.
3.6 Write and publish three popular articles on leading national dailies	Three articles published in Nepali leading online sites (Doc 20, 23) and one in both print and online (Doc 24)	Two more will be published in year 3
<i>3.7 Prepare, produce and disseminate a video (documentary) to conceptualise, highlight and operationalise overall biodiversity conservation in community forests</i>	A draft documentary has been prepared	Will be organised one more field work and editing of the video in year 3.
<b>Output 4. Forest based micro enterprises including ecotourism facilities established and operationalized for enhancement of local livelihoods</b>	<p>4.3 Women (n=100) from marginalized and disadvantaged groups trained on enterprise establishment and operation by end of year 3.</p> <p>4.4 20% increase in household income from women-led enterprise (n=100 households) agroforestry, shade crops and NTFPs by the end of year 2.</p> <p>4.5 Seedlings of fodder, NTFPs ( five</p>	<p>4.3. Training was provided to women members engaged in agroforestry (126), fisheries (31), male members (15) in compost production (Doc-18).</p> <p>4.4. Income generation is expected from agroforestry and compost production initiated in year 2.</p> <p>4.5 Agroforestry initiated in three CFUGs where plantation will be conducted and a private nursery has been supported (Doc-02) that will produce and distribute seedlings of native fodder.</p> <p>4.6. 31 households engaged in fisheries are expected to generate income.</p> <p>4.7. Only exploratory works has been done.</p>

	<p>species) and bamboo planted (n=30,000) by end of year 3 (This activity is linked with forest management as well in output 1)</p> <p>4.6 20% increase in household income of indigenous people and Dalit (n=50) from fishery in restored wetlands by end of year 3.</p> <p>4.7 At least 30 local youths (half are women) trained on ecotourism and at least 15 youths generate income through tourism related enterprise by end of year 3.</p> <p>4.8 Biodiversity Demonstration Block (BDB) identified, promoted and</p>	<p>4.8. Forest survey completed and potential sites have been identified and will be finalised in year 3.</p>	
<p>Activities</p> <p>4.1 Conduct a feasibility study on forest based microenterprise</p>		<p>Completed in year 1</p>	
<p>4.2 Prepare business plan for Bamboo/rattans, tourism and fisheries</p>		<p>Completed</p>	
<p>4.3 Identify disadvantaged women and support them in enterprise development including fisheries</p>		<p>Households selected in collaboration with CFUGs (Doc-18)</p>	<p>More households will be supported in agroforestry</p>
<p>4.4 Designate biodiversity demonstration block, prepare and provide necessary information for visitors</p>		<p>Field survey completed and potential sites will be developed as demonstration block.</p>	
<p>4.5 Support to establish tourism facilities and prepare brochures highlighting ecological, cultural value of Jalthal forest to attract domestic tourists</p>		<p>A broacher has been prepared (Doc-21) that provides information about Jalthal forest</p>	
<p>4.6 Provide skill development training to local people by including women and disadvantaged group of people</p>		<p>Skill trainings were provided to local people in fishery, compost and agroforestry (Doc-18)</p>	
<p>4.7 Support women groups by providing seed fund and technical support to start agroforestry in designated areas of CF and in private lands</p>		<p>Women in three CFUGs were supported for turmeric plantation in Mikania cleared areas</p>	
<p>4.8 Organise exposure visits for women groups to see ecotourism programs (35 Participants, 18 women)</p>		<p>Organised in year one but not in year 2.</p>	<p>This activity will be revisited</p>

4.9 Organize a sharing and exit workshop with local stakeholders at the end of the project 1.10 Final reporting	Year 4 program	
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## Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Impact: Biodiversity conservation mainstreamed in CF policies and practices, biodiversity in CFs enhanced, forest and wetlands are restored and local people benefit through forest-based enterprise including ecotourism and fisheries</b> (Max 30 words)			
<b>Outcome:</b> (Max 30 words) Jalthal biodiversity and ecosystems are restored with significant livelihood benefits and biodiversity conservation is mainstreamed in National CF policies and plans	0.1 22 CFUGs (representing more than 80,000 people) and 5000 local people (CFUG members), of which 50% are women, directly engaged in sustainable forest management activities by end of Year 3. 0.2 22 Community Forest Operational Plans (CFOPs) revised with a separate biodiversity section by the end of Year 3. 0.3 At least 100 foresters and CFUG leaders (40% women) trained to mainstream overall biodiversity conservation in CFOP by end of year 2. 0.4 Jalthal biodiversity assessed and detailed photographic profiles of 40 ( 20 floral and 20 faunal) species prioritised for conservation prepared and communicated through printed booklets (1000 copies) and three field education programs organised for awareness building and biodiversity identification by end of year 3. 0.5 Mikania cover in the Jalthal forest reduced by 80% (ca 1500 ha land cleared ) which have direct positive effect on regeneration and conservation of native flora and associated faunal species on those sites by end of the project. Satellite population controlled/destroyed in adjoining areas by the end of project. 0.6 Tree regeneration density (seedling density and sapling ) increased by 10 % by end of the of the project in response to land restoration and protection measures adopted.	0.1 Meeting minutes of CFUGs, project briefing notes 0.2 CFOP and general assembly decisions 0.3 Training participant register, training materials, training reports 0.4. Assessment report and species specific profiles and printed booklet 0.5. Baseline and endline data, interview with local resident, photographs, satellite images, assessment reports monitoring evaluation report, comparison of baseline and end line data 0.6. Baseline and endline data comparison 0.7 Plantation report, CFUG record books 0.8. Plantation report, registry of participant of Mikania cleaning 0.9 Beneficiary interviews, CFUG records 0.10 Biodiversity demonstration block in place, sign boards, information centre, published materials .11 Policy brief, changed forest	0.1 CFUGs and stakeholders acknowledge Mikania invasion as a major problem 0.2 There will be broader political support in Jalthal forest management and restoration programs 0.3 Local governments also develop plans for tourism development and livelihood support in Jalthal area. 0.4 Mikania propagation and spread can be controlled through site management and new entry will be early detected and controlled. 0.5 Policy/decision makers in the Ministry of forest in federal and Provincial government cooperate 0.6 Human wildlife (particularly Elephant) conflict minimised.

	<p>0.7 Five native NTFPs species including bamboo and rattans selected and used to establish forest based enterprise by end of year 3.</p> <p>0.8 Agroforestry including shade crops, NTFPs generates income for 100 poor households through women groups and contributes in Mikania control by end of year 4.</p> <p>0.9 50 poor households from indigenous and <i>Dalit</i> community benefit from fisheries (with native fish species) in two restored wetlands by end of year 3.</p> <p>0.10 Tourism facilities (information centre, nature guides, brochure) established and 30 local people including 15 women get trainings for tourism enterprise and 15 of them are supported for enterprise development by end of year 3.</p> <p>0.11 Provisions for biodiversity conservation integrated in National CF Guidelines by end of the project.</p>	<p>operational plans, peer reviewed publication, biodiversity registers</p>	
<p><b>Output 1. Forests are sustainably managed with greater diversity, enhanced structural complexity and improved productivity, and institutional capacity for biodiversity conservation enhanced</b></p> <p>CFOP: Community Forest Operational Plans are approved documents guiding forest management, product harvest silviculture and forest conservation.</p>	<p>1.12 Participatory biodiversity assessment conducted, 22 members from CFUG and local, national and international experts/ technicians (Forester, ecologist/ botanist and wildlife biologist) engaged in the assessment and forest biodiversity profile prepared by the end of year 3.</p> <p>1.13 Two trainings on forest biodiversity management (including key attributes and habitat trees) organized in Year 1,</p>	<p><b>1.1</b> an assessment report, a baseline data, M Sc student thesis, Checklist of flora and fauna, assessment participant registry.</p> <p>1.2 Training report, forest management plan, Participant interviews</p> <p>1.3. copies CFOP/general assembly decision notes</p>	<p>1.1 New Federal Forest Law recognises Community Forestry and respect its objectives</p> <p>1.2 Local government and CFUGs maintain a good collaboration and cooperation</p> <p>1.3 Human wildlife conflict minimised and managed</p>

<p>Year 1, 2, 3 refer to project years (for example year 1 means April 1 2019-March 30 2020).</p>	<p>66 people trained from 22 CFUGSs</p> <p>1.14 22 CFOP revised and implemented by end of year 3 to incorporate overall biodiversity conservation strategy, approaches and tools by CFs</p> <p>1.15 5,000 bamboo culms planted in forest and private lands, rattan pocket areas identified, and managed by the end of year 2</p> <p>1.16 At least 30,000 native fodder trees in CF and private lands planted by the end of project</p> <p>1.17 Rare, threatened, endangered and unique species and vulnerable ecosystems identified and protection measures are included in CFOP by end of year 3.</p> <p>1.18 Species profiles for 40 species (20 floral and 20 faunal including birds) species prioritised for conservation prepared and disseminated in project sites by end of Year 2.</p> <p>1.19 Jalthal Biodiversity register as envisioned by Nepal Biodiversity Strategy and Action Plan (NBSAP 2014-2020) prepared and maintained by mid of year 3.</p> <p>1.20 Checklist of all plant species in Jalthal forest prepared by end of year 2.</p> <p>1.21 Tree regeneration density, seedling and sapling density increased by 10% and 5% respectively by end of the project.</p> <p>1.22 Prepare and publish a</p>	<p>1.4 Plantation reports, CFUG records</p> <p>1.5 Plantation report, users books, baseline survey</p> <p>1.6. copies CFOP</p> <p>1.7. Booklet of profiles (1000 copies)</p> <p>1.8. Biodiversity register available in appropriate office and open access data available ForestAction Website</p> <p>1.9. Checklist hard and soft copy published open access</p> <p>1.10 Forest survey data comparisons between baseline and end line data</p> <p>1.11 Profile printed copies and pdf for free distribution</p>	
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	<p>comprehensive account of Biodiversity of Jalthal forest in Nepali (500 copies) and English (pdf file) language by end of year 4 [This document expected by local people and stakeholders]</p>		
<p><b>Output 2. Mikania invasion including satellite populations substantially reduced and controlled, degraded forest areas and wetlands reclaimed and converted into productive systems through 'integrated site management'</b></p>	<p>2.1 Spatial extent and abundance of Mikania including its environmental correlates analysed for its control, management and monitoring by end of the 3<sup>rd</sup> quarter of year 1; Endline data by end of year 3.</p> <p>2.2 Participatory Mikania management and control plan for Jalthal prepared by third quarter of year 1.</p> <p>2.3 Bilingual (Nepali/local and English) colour booklet (1000 copies) on Invasive Alien Species (IAS) of Jalthal forest prepared and distributed By end of year 2.</p> <p>2.4 Mega campaign for <i>Mikania</i> control organized annually (ca 10,000 man-days workers involved altogether) to control Mikania in the forest; satellite populations around the forest are also destroyed by end of year 3.</p> <p>2.5 Mikania cover in the Jalthal forest reduced by 80% (ca 1500 ha land cleared) by the end of year 3.</p> <p>2.6 Existing and potential use of Mikania identified , promoted and communicated ( roughly 5 metric tons of Mikania biomass turned into compost and bio-gas) by end of the project</p> <p>2.7 Two of the largest wetlands in the Jalthal forest restored by removing Mikania</p>	<p>2.1. Assessment report</p> <p>2.2. Control plan and CFUG record book, photographs</p> <p>2.3. Printed booklet and PDF documents</p> <p>2.4 Field report, CFUG records, Remote sensing analysis</p> <p>2.5 Users record book, field data and comparison of baseline and end line data</p> <p>2.6. Activity record, users survey, Amount of biomass converted into compost</p> <p>2.7 baseline and end line data collection</p>	<p>2.1 CFUGs participate in bush cleaning for dual purpose 1) bush cleaning as part of their regular job and 2) Incentives for bush cleaning to CFUGs</p> <p>2.2 Local government, civil society and CFUGs acknowledge the threats posed by Mikania</p>

	and controlling siltation by end of year 3.		
<b>Output 3. Biodiversity conservation and values are appreciated and integrated into community forestry policy and planning process; communication/awareness raising materials highlighting biodiversity conservation prepared and disseminated for diverse stakeholders</b>	<p>3.8 Gaps and opportunities of biodiversity conservation in CF identified through detail review of selected 50 CFOPs in year 1.</p> <p>3.9 A manual for integrating biodiversity in CFOP developed for facilitators/practioners by end of year 1.</p> <p>3.10 20 practitioners/facilitators (Government officers) are trained on biodiversity integration in CFOP in year 1.</p> <p>3.11 National level stakeholders (n=60) sensitised and informed on biodiversity integration in CF policy and practice by end of the project</p> <p>3.12 Challenges and opportunities for mainstreaming biodiversity conservation in CF highlighted though a policy brief (500 copies) in year 3.</p> <p>3.13 Wider audience informed on importance of biodiversity and its conservation measures through at least three newspaper articles on national dailies (One each in Year 1, 2 and 3).</p> <p>3.14 A documentary on good practice linking biodiversity conservation and livelihood produced and disseminated by end of year 2.</p>	<p>3.1 Peer reviewed article published by the end of the project</p> <p>3.2 Printed and e-Copy of the manual</p> <p>3.3 Training report, Participant register</p> <p>3.4 Workshop report, participant register,</p> <p>3.5 printed copies and PDF of Policy brief</p> <p>3.6 Newspaper cut /e copies</p> <p>3.7 Video and YouTube viewers data</p>	<p>3.1 Federal, provincial and local government appreciate biodiversity conservation thereby supporting in CF policy and practices</p>

<p><b>4. Forest based enterprises including fishery and ecotourism facilities established and operationalized for enhancement of local livelihoods</b></p>	<p>4.1 A scoping report on potential forest based enterprise prepared by the end of Year 1.</p> <p>4.2 A business schemes of selected enterprise (Tourism, fisheries, bamboos and rattans) prepared by the end of Year 1.</p> <p>4.3 Women (n=100) from marginalized and disadvantaged groups trained on enterprise establishment and operation by end of year 3.</p> <p>4.4 20% increase in household income from women-led enterprise (n=100 households) agroforestry, shade crops and NTFPs by the end of year 2.</p> <p>4.5 Seedlings of fodder, NTFPs ( five species) and bamboo planted (n=30,000) by end of year 3 (This activity is linked with forest management as well in output 1)</p> <p>4.6 20% increase in household income of of indigenous people and <i>Dalit</i> (n=50) from fishery in restored wetlands by end of year 3.</p> <p>4.7 At least 30 local youths (half are women) trained on ecotourism and at least 15 youths generate income through tourism related enterprise by end of year 3.</p> <p>4.8 Biodiversity Demonstration Block (BDB) identified, promoted and characterised (Name, ecology, conservation status) for eco-tourism by second quarter of year 3.</p>	<p>4.1 copies of the assessment report</p> <p>4.2 Copies of business schemes for specific enterprises</p> <p>4.3 Participant register, training reports</p> <p>4.4 Plantation report, CFUG record books, interview with local people, Survey results</p> <p>4.5 Plantation reports, beneficiary survey, CFUG record book</p> <p>4.6 Beneficiary interviews, CFUG reports, Survey report</p> <p>4.7 Participant register, training manuals, documents of enterprise (for example registration, photos, news evidences)</p> <p>4.8 BDB block in place</p>	<p>Municipalities appreciate and prioritise tourism development as part of their overall development planning</p> <p>New Forest Law allows such tourism related activities.</p> <p>The human-elephant conflict managed/minimised by the ongoing projects</p>
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### Annex 3: Standard Measures

**Table 1 Project Standard Output Measures**

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
2	Thesis on biodiversity and forest management	3M, 2F	Nepali	3	2	1	5	6
11A	Research results	NA		1	1	1	2	3
9	Species management plan	NA			1	1	1	3
10	Identification manual for useful plants	NA			20	10	20	30
7	Awareness leaflets	NA		2	3	2	5	7
14 A	Workshops/trainings	NA		7	6	3	13	15
14 B	Conference presentation	M	Nepali	0	1	1	1	2
22	Permanent plots	NA				3	0	3
20	Computers, Cameras, Printers, GPS	NA						

**Table 2 Publications**

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
<i>Drypetes assamica</i> (Putranjivaceae): A New Record of a Tree Species for the flora of Nepal	Journal Article	Sharma LN, paudel YB and Adhikari B( 2021)	Male	Nepali	Department of Plant resources	Accepted MS
Records of Jerdon's baza <i>Aviceda jerdoni</i> Blyth 1842 from eastern Nepal	Journal article	Tamang S, Paudel A, Pandeya P (2021)	Male	Nepali	Tribhuvan University	Accepted MS

Link of other popular published materials are given in the Doc 40