

CLIMATE INNOVATION CHALLENGE

Monthly Progress Update for the month of May 2022

Reporting Period (Month)	Reporting for the month of May 2022
Grantee Name	<u>Tarayana Micro Finance Private Limited</u>
Project Title	Technology driven microloan fund for climate adaptation of remote, vulnerable mountain communities in Bhutan
<ul style="list-style-type: none"> • List the key activities in your workplan undertaken/completed during this month. • TMF Cloud to mBOB integration and migration: <p>TMF has shared the process flow with BoBL which delineates the API coding to BoBL and the system description to align the TMF system and preparation of the integration. This process will further dictate the requirement from TMF system and check the compatibility with the BoBL system.</p> <ul style="list-style-type: none"> • Credit processing, disbursement of climate adaptation loan <p>TMF has processed and disbursed one pilot loan to a community of Laya. The community members showed great interest in availing loans as soon as the community return from collecting the cordyceps. It was observed that these communities had unsecured wealth which was often left idle due to the remoteness and lacked investment opportunities after the sale of the cordyceps.</p>	
<ul style="list-style-type: none"> • List additional activities (outside the workplan) undertaken during this month. <p>The Project presented the progress of TMF and the CIC project on 13th May coinciding with the celebration of the Foundation Day.</p> <p>Discussion of the possibility of the live demonstrations of agricultural machinery products to the communities of Laya and Lungo in June.</p> <p>CEO of TMF presented on Climate-related Fiscal Risks and Financing Solutions on 23rd May 2022 in Bhutan organized by ADPC</p>	

1. Some of the activities reported do not correspond to the activities in the work plan. Please list/report against the activities in the work plan.

NA

List the key beneficiaries /stakeholders consulted during this month

- BoBL Team

- Summarize key achievements and milestones of this month

1. API development progress and user acceptance testing

- a. Deployed the first version of the API which returns customer name and basic loan information using the input parameter 'cid_loan' (CID) for the user acceptance testing

-

- Sample output:

```
{"cid_loan": "11215003290", "name": "Karna Bdr Rai", "product_list": [{"loan_id": "112150025T18:00:00.000Z", "total_close_loan": 87689.5424660117}]}
```

- b. Added API key for security purposes

```
function doGet(e) {  
  console.log({message: 'API 1: doGet - Start', e: e});  
  
  // Check apikey. If apikey is not provided or is not correct - respond with error code  
  if ((e.parameter['apikey'] === undefined) || !(e.parameter['apikey'] in API_KEYS_)) {  
    console.log('API 1: doGet - "${RESPONSE_ERROR_401}"');  
    return ContentService.createTextOutput(JSON.stringify(RESPONSE_ERROR_401));  
  }  
  
  let API_access_level = API_KEYS_[e.parameter['apikey']];  
  console.log('API 1: doGet - API key is correct, access level: "${API_access_level}"');
```

-

- c. Programmed response errors for different type of invalid requests

```

// Error responses provided by the API for different types of invalid requests
// 400 - general error message
const RESPONSE_ERROR_400 = {
  "error": {
    "code": 400,
    "message": "Bad request"
  }
}

// 401 - request is missing API key or API key is invalid
const RESPONSE_ERROR_401 = {
  "error": {
    "code": 401,
    "message": "Missing / invalid API key"
  }
}

// 402 - no CID or loan ID provided in the request
const RESPONSE_ERROR_402 = {
  "error": {
    "code": 402,
    "message": "No CID or Loan ID provided"
  }
}

// 403 - request parameter required with Loan ID is missing or invalid
const RESPONSE_ERROR_403 = {
  "error": {
    "code": 403,
    "message": "Missing / invalid Loan ID request parameter"
  }
}

// 404 - provided CID does not exist in the TMF system
const RESPONSE_ERROR_404 = {
  "error": {
    "code": 404,
    "message": "Customer does not exist"
  }
}

// 405 - provided CID exists in the TMF system but has no active loans
const RESPONSE_ERROR_405 = {
  "error": {
    "code": 405,
    "message": "No active loans"
  }
}

// 406 - provided Loan ID does not exist in the TMF system
const RESPONSE_ERROR_406 = {
  "error": {

```

-
- 2. Next steps for TMF and BOB integration
 - a. Program Upcoming Payments and Payment History return parameters

- List key challenges to be resolved

As the communities of Laya and Lungo will be harvesting the cordyceps for 2 months, the team will schedule the visit at the earliest.

- Any additional challenges (observations/learning in terms of the applicability, scalability and sustainability)

Note: The progress update helps managing and monitoring the implementation of the pilot project. It helps identifying any emerging risks and resolve it quickly. The progress update is helpful to disseminate the lesson to a wider range of audience.

The monthly update should be of maximum of two pages. Please share field photos , brochure, leaflets, presentation in its original format as attachment to the month update