



Norway's International  
Climate and Forest Initiative  
(NICFI)

# Annual Work Plan 2021

December 2020

PLANNING



# **Provision of Adequate Tree Seed Portfolios (PATSPO)**

ETH-16/0018

## **Annual Work Plan 2021**

**“no cost extension year”**

**Prepared by**

**World Agroforestry Centre (ICRAF)**

**in collaboration with the**

**Environment, Forestry and Climate Change Commission of Ethiopia (EFCCC)**

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### **List of Abbreviations and Acronyms**

ABM	Agricultural Bureau Mekele
AFE	Amhara Forest Enterprise
AWP	Annual Work Plan
BSO	Breeding Seed Orchard
CRGE	Climate Resilient Green Economy
DFD	Directorate of Forest Development (under EFCCC)
EBI	Ethiopia Biodiversity Institute
EEFRI	Ethiopia Environment and Forest Research Institute
EFCCC	Environment, Forest and Climate Change Commission Ethiopia
CEE-FRC	Central Ethiopian Environment and Forest Research Centre
GIZ	German International Cooperation
GOE	Government of Ethiopia
ICRAF	World Agroforestry Centre
INDC	Intended Nationally Determined Contribution
ITA	International Technical Assistance
MANR	Ministry of Agriculture and Natural Resources
MEFCC	Ministry of Environment, Forest and Climate Change, Ethiopia (now EFCCC)
M&E	Monitoring and Evaluation
MRM	Management Response Matrix
MTR	Mid-term Review
NFG	Norwegian Forestry Group
NGO	Non-Governmental Organisation
NICFI	Norwegian International Climate and Forest Initiative
OFWE	Oromia Forest and Wildlife Enterprise
PATSPO	Provision of Adequate Tree Seed Portfolios
PIP	Project Implementation Plan
PMF	Performance Management/Measurement Framework
PMT	Project Management Team
RAF	Risk Assessment Framework
RNE	Royal Norwegian Embassy
RSE	Regional Seed Enterprises
RTSC	Regional Tree Seed Centre
SC	Steering Committee (for PATSPO Project)
SNNPR	Southern Nations, Nationalities and Peoples Region
SSO	Seedling Seed Orchard
TCC	Technical Coordination Committee
TOR	Terms of Reference
TSC	Tree Seed Centre
TSTC	Tree Seed Technology Coordination of EEFRI
UAA	University of Addis Ababa

## 1 INTRODUCTION

This Annual Work Plan (AWP) 2021 is covering the one-year “no-cost-extension” of the PATSPO Project. It is based on the Project Document and the 4-year work plan in the project document, 2017-2020 (PATSPO 2017). It starts where the AWP from 2020 ends and includes recommendations and activities, agreed between Ethiopian Environment, Forest and Climate Change Commission (EFCCC), Royal Norwegian Embassy (RNE) and World Agroforestry (ICRAF), from the PATSPO Mid-term Review Report (MTR, Feb. 2020), the Management Response Matrix (MRM) and the Extension Note prepared by PATSPO/ICRAF (May 2020). The Annual Work Plan 2021 covers the full calendar year January to December 2021.

The Performance Management Framework (PMF) is being used as the planning system for PATSPO together with the Risk Assessment Framework (RAF). In the PMF and RAF, the cornerstones related to annual activity planning are:

**Impact:** Development objective (goal or long-term objective): The main overall objective that the project is meant to contribute to in the long run, and which explains the reason why the project is implemented. Impacts are positive and negative, primary and secondary long-term effects resulting from a chain of events to which development and research has contributed, directly or indirectly, intended or unintended. These effects can be economic, socio-cultural, institutional, environmental, and technological or of other types.

**Outcome:** Immediate objective (project purpose or short-term objective): The immediate reason for a project. The effect, which the project is expected to achieve, if completed successfully and on time. Outcomes are intended or unintended short-term and medium-term effects resulting from an intervention’s outputs, change in knowledge, attitudes and skills, manifest as change in discourse, institutions, policy and practice that result in part from the activities.

**Outputs/expected results:** The results that can be guaranteed by the project as a consequence of its activities. The sum of the outputs should result in the achievement of the project objectives (outcome and impact), provided valid assumptions with respect to risks.

**Activities:** Actions taken or work performed within a project in order to transform inputs (funds, materials) into outputs (organisation, buildings, capacity etc.).

All the elements (impact, outcome, outputs) are with specification of **performance indicators, performance targets, means of verification, verification frequency and allocation of responsibility**.

The AWP assesses the relevance of the project objectives and outputs; continues with the major project activities for the year; provides a graphic time schedule of the planned sub-activities; lists the expected main results to be produced; presents the major assumptions with respect to risks of relevance for PATSPO during the coming year, and finally provides information on the budget implications. An activity plan and implementation schedule are presented in appendix I. The foreseen technical assistance for 2021 is given in appendix II. The Risk Assessment Framework together with an assessment of relevant risks, as well as assessment of cross cutting issues in

appendix III, and the Performance Measurement Framework in appendix IV (based on the updates presented in the Progress report for 2018, 2019 and 2020).

## 2 MAJOR CHANGES SINCE LAST PLAN

The implementation of the project was initiated with a six months inception phase following the approval of the project agreement between the Royal Norwegian Embassy (RNE) and ICRAF in May 2017 with final deliberations taking place during the month of June. The inception phase thus in practise started on the 1<sup>st</sup> of July 2017 and ended on the 31<sup>st</sup> of December 2017. The inception phase was followed by implementation in 2018-2020 based on annual work plans for each year submitted in November the year before the planning period. The latest reporting from the project (Progress Report 2019) was discussed at the Annual Formal Meeting (virtual) between the Royal Norwegian Embassy and ICRAF on 15 June 2020, in accordance with the Grant Agreement. The last plan referred to is thus the annual work plan for 2020.

According to the Grant Agreement for PATSPO, ETH-16/0018, the project will end 31<sup>st</sup> of December 2020. External consultants did a Mid-Term Review (MTR) Jan-Feb 2020. The MTR Report and related Management Response Matrix (MRM) were discussed and reviewed by EFCCC and RNE with inputs from PATSPO/ICRAF. The MTR Report and the MRM were finalized in April 2020. EFCCC, RNE and PATSPO/ICRAF agreed to recommend a one-year 'no-cost-extension' (2021).

A virtual "Extension Meeting" was held on 15 June, before the Annual Formal Meeting between the RNE and ICRAF/PATSPO was held later on the same day, with participants from EFCCC, EEFRI, RNE and PATSPO/ICRAF. An "Extension Note" prepared by PATSPO was discussed at the meeting and the recommendations and activities from the MTR were agreed upon and are incorporated into the AWP 2021 together with an "exit strategy", see section 4 and Appendix V. Reference is made to the minutes from the extension meeting for further details.

The main points agreed for preparation of the no-cost-extension were:

- A no-cost extension of PATSPO until the end of 2021 is relevant and needed
- PATSPO will prepare draft AWP for 2021, incl. updated results framework based on recommendation from the MTR and the Ext. Meeting, by end August or early September 2020 for discussion and finalization with EFCCC (Directorate of Forest Development (DFD)) and RNE.
- Exit Strategy (max 5 pages) will be included in the AWP 2021.
- When the AWP 2021 and more specific no-cost extension documents are ready, a joint discussion will take place.
- Request for a one-year extension (2021) within the PATSPO ETH-16/0018 Grant Agreement will be prepared by ICRAF/RNE by end September 2020.
- Due to travel restrictions (Covid-19), there may be delays.

The Annual Formal Meeting (virtual) was held on 15 June 2020 and the following main conclusions was highlighted by the RNE:

- The narrative progress and financial reports are tentatively approved provided that the revised reports address RNE's comments. The Audit Report 2019 is approved.
- ICRAF should submit the necessary documentation for the Embassy in September 2020 to process the no-cost extension for 2021.
- Provided the project is extended until end 2021, the RNE and ICRAF should start discussing early 2021 how to do conduct the end-of-project-evaluation.
- Next Annual Meeting will be in May 2021, provided the project is extended until end 2021.

For details reference is made to the minutes from the meeting.

Year 2021 being a “no-cost-extension” period and the present corona situation in Ethiopia, restricting in particular field activities, have implied that PATSPO activities planned for 2021 will focus on consolidation the achievements accomplished so far and the “phasing over” of activities to the government institutions.

In practice it means more focus on the following outputs:

- I. Tree seed sector developed, including delivery systems
  - II. Tree seed and seedling knowledge and information systems in place
  - IV. Capacity of the national institutions in management of tree genetic resources improved
- and less on output:
- III. Existing seed sources upgraded, and new seed sources established

This prioritisation is reflected in the level of activities under each output and consequently also the level of planned deliverables for each output.

### **3 OBJECTIVES AND OUTPUTS**

A major challenge of tree-based restoration work is that it generally requires the use of many tree species at the same time. Where restoration is based on natural regeneration, it would thus require the presence of healthy and diverse seed sources and/or soil seed banks. When planting is necessary, whether for replenishment or enrichment, the supply of a broad spectrum of genetically diverse, healthy and productive tree species is generally not easily available. Traditional supply programmes focus on relatively few species, most of them of unknown genetic quality and often with insufficient knowledge on adaptation to site conditions and adaptability to climate change.

The project addresses this major challenge by providing a multiple tree species programme able to provide:

- organizational setup of the tree seed sector, including stakeholder identification and roles and responsibilities, - based on a sector analysis,
- species specific knowledge for most priority tree species, including:
  - the plant ecological base line for restoration
  - the potential natural distribution of multiple species and how they may be affected by climate change
  - Quantitative and DNA-based genetic variation patterns for priority tree species
  - an interactive knowledge and information portal for users,



- a build-up and establishment of the tree genetic resources for the future, comprising exploration, mobilisation, conservation, establishment, management and improvement, and
- capacity to monitor and deliver quality seed and seedlings of multiple species required for large scale restoration.

The strategy of the project linking impact, outcome, and outputs is further elaborated in this section.

#### **a. Impact and Indicators**

The Project Impact (development goal) is: *Ethiopia's national forest restoration targets for the next 20 years and beyond are reached.*

This is an impact objective, which is highly dependent on government and other actors and activities outside of the project's control. However, it is the ultimate impact on society that the project is aiming to contribute to (cf. Executive Summary of the project document, "the project is designed to support the large-scale forest and landscape restoration programme, which is part of the green growth strategy of GOE").

The project is a long-term investment by which current and future landscape restoration activities in Ethiopia involving the use of trees will be enhanced.

The major Impact Performance Indicators are associated with the landscapes to be restored through planting of trees:

- Area restored using quality tree seedlings raised from quality seed [Impact].
- Amount of quality tree seed of priority species made available (produced and delivered) for restoration plantings in Ethiopia [Outcome].
- Tree seed delivery system elements in place [Output I].
- Technical knowledge and information system for the tree seed sector available [Output II].
- Number of existing seed sources upgraded and in use and number of new seed sources (Breeding Seed Orchards - BSO/SSOs) established and in use [Output III].
- Number of staff and stakeholders trained (at training courses and through extension activities) and number of (relevant) training- and extension material produced [Output IV].

The positive effects of restoration will also manifest in improvements like:

- Water availability increased, soil erosion reduced, and agriculture production potential increased in restored landscapes.
- Livelihood increased for people living in and around the restored landscapes.

The extent to which such effects can be measured will be considered during the project. An ongoing assessment will be finalized in 2021.

#### **b. Outcome and Indicators**

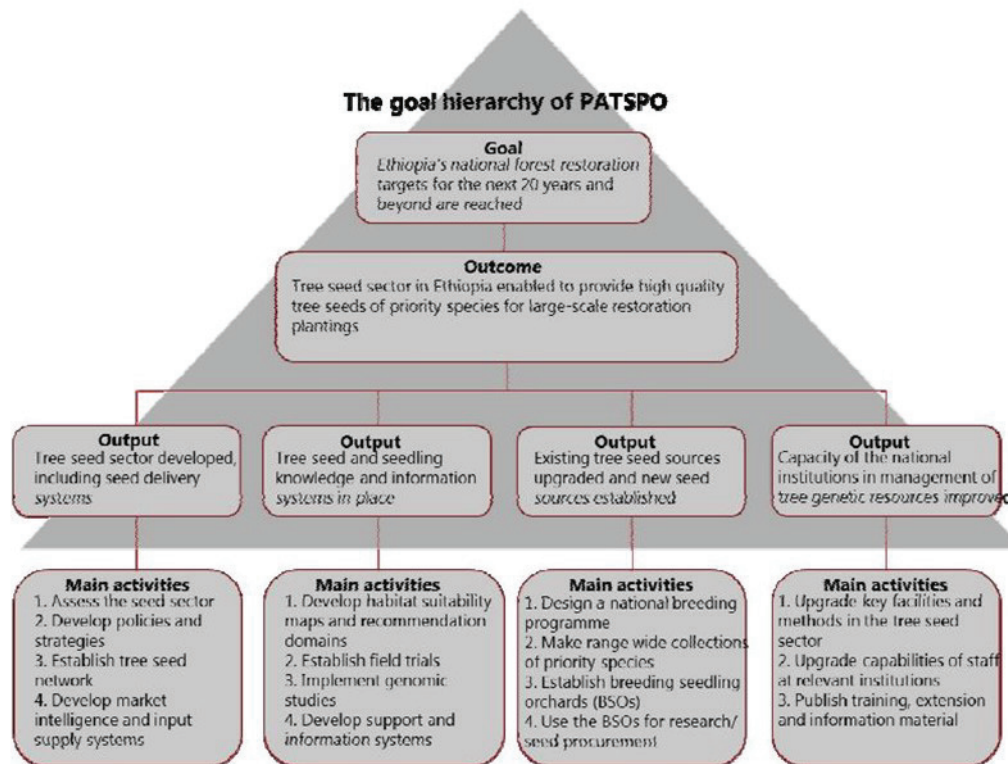
The Project Outcome (project purpose) is: *Tree seed sector in Ethiopia enabled to provide high quality tree seeds of priority species for large-scale restoration plantings.*

The implication is that improved reproductive material of indigenous and exotic tree species for use in landscape restoration purposes in Ethiopia is explored, characterised, conserved, mass produced and delivered by the tree seed sector.

The major Outcome Performance Indicators are associated with the actual delivery of quality tree seed as a basis for better forest landscape restoration:

- Amount of quality tree seed of priority species made available (produced and delivered) for restoration plantings in Ethiopia [Outcome].
  - Amount of quality tree seed of priority species produced.
  - Amount of quality tree seed of priority species distributed.
  - Ratio of supply vs demand of quality tree seed of priority species.

The indicators and means of verification for impact, outcome and outputs are summarised in the updated Performance Measurement Framework (PMF) in appendix IV; and the updated Risk Assessment Framework (RAF) and the updated assessment of cross cutting issues in appendix III.



**Figure 1.** Elements of the PATSPO Project results framework, the goal hierarchy (which also encompass the project *theory of change*, as described in the project document).

### c. Outputs

To meet the project outcome, four Project Outputs will be delivered by the project:

#### ***Output I. Tree seed sector developed, including delivery systems***

The role of the tree seed sector is to provide reproductive material for the right tree at the right place for the right purpose. This involves the productive functions of providing good seed and the normative functions of providing standards, guidance and mechanisms to influence and monitor the use of seed.

This output will strengthen the tree seed sector in Ethiopia and gather continuously updated information on the actual situation in the tree seed sector in Ethiopia. The data gathered so far is

presented in a ‘Baseline Report’ (2019) for the project, made to support the preparation of strategies, definition of roles and responsibilities of the actors in the sector, seed supply-demand modalities, seed source establishment, etc. To identify appropriate models for seed supply, a sub-sector assessment is a useful tool for developing appropriate business development services. The objective of a sub-sector assessment is to analyse all the participants, their linkages, and influential factors in the agribusiness system in order to identify constraints and opportunities for growth. The sub-sector review should explore opportunities for leveraged intervention, determining where opportunities for intervention and points of leverage converge.

Typical immediate areas of action to improve the situation are:

- Immediate and future germplasm sources for particular agroforestry interventions should be determined at the planning stage or as early as possible within the program.
- Consultations among the possible public and private actors involved in germplasm delivery should be undertaken before field implementation of the activities begin.
- The participation of small-scale entrepreneurs including commercial nurseries and seed suppliers should be considered.
- A monitoring and evaluation (M&E) protocol (MEP) to measure the impacts of chosen approaches should be established.

The performance indicator for *Output I* is Tree seed delivery system elements in place. The performance targets include (cf. Appendix IV):

- Assessed and upgraded strategies and policies for the tree seed sector in place, - done in close collaboration with EFCCC.
- Demand and supply scenarios in place.
- Established and well-functioning tree seed network and – forum for the tree seed sector in place.

The baseline was – with some difficulties - produced in 2018 and published in 2019 (cf. AWP 2018-2019 and progress 2018-2019). The sector review was presented and discussed at a workshop for the project stakeholders on 26 Feb. 2019.

### ***Output II. Tree seed and seedling knowledge and information systems in place***

This output will provide the knowledge and information required to establish a national modality for conservation, improvement and utilization of tree genetic resources, leading to establishment of improved seed sources *cum* conservation areas, as well as delivery of germplasm of the priority tree species in Ethiopia. The project will develop and test species and provenance specific recommendation domains, combining the expertise of national and international tree seed and research centres, high resolution present and future climate data sets, species distribution records and new approaches for habitat distribution mapping, recently developed by the partners involved in the project.

The performance indicator for *Output II* is Technical knowledge and information system for the tree seed sector available. The performance targets include (cf. Appendix IV):

- Maps and related tree planting recommendation domains covering all provinces of Ethiopia in place.
- Species/seed source selection portal/system (“What to plant where”) in place.
- Field trials (incl. BSOs) to support development of superior seed sources in place and analysed.

- Genomic studies of selected priority species to support development of superior seed sources performed.

Maps and field trials are well underway, genomic studies for use in the BSO establishment was initiated in 2019, and work on the portal started in 2020. There will be work in all areas during 2021.

***Output III. Existing seed sources upgraded, and new seed sources established (tree genetic resources for the future mobilised and developed)***

This output will identify existing- and establish new seed production *cum* conservation areas of the priority tree species in Ethiopia. The new seed production areas will be established as breeding trials and at the same time serving as seed production areas producing genetically high-quality seed. The aim is to make the at any time best quality seed available for tree planting activities in Ethiopia, while at the same time continuously improve the quality of the seed.

The performance indicators for *Output III* are Number of existing seed sources upgraded and in use; and number of new seed sources (BSOs/SSOs) established and in use. The performance targets include (cf. Appendix IV):

- National tree breeding programme for priority tree species covering 80-90 % of the seed demand (base of seed sources).
- Up to 75-150 BSOs/SSOs of the priority tree species established.
- Up to 400-500 seed sources identified and described in existing forests and plantations throughout Ethiopia.
- Between 250 - 1000 tons of quality tree seed of priority species procured annually by the tree seed sector, ref. section 10a in the project document (output of seed sources).

The preparation of the breeding programme, establishment of seed orchards and seed source identification/description were all begun in 2018 to continue throughout the project; and seed was delivered from the RTSCs and the FRC under EEFRI. All activities continued in 2019-2020 will be continued further in 2021.

***Output IV. Capacity of the national institutions in management of tree genetic resources improved***

This output will, through a substantial training and education programme, provide capacity building for all major actors in the tree seed sector in Ethiopia. In addition, needed equipment will be made available for the major national and provincial organisations. The primary focus is on 1) the Tree Seed Technology Coordination of EEFRI (TSTC) and the four Regional Tree Seed Centres (RTSCs) to be adequately upgraded, staffed and equipped; 2) that project relevant knowledge and capabilities of staff at all levels among relevant stakeholders are upgraded and maintained; and 3) that relevant technologies and capabilities in appropriate tree seed procurement are imparted to target beneficiaries through training, information, marketing and extension. The intention of this focus is to achieve large scale impact through the technical training.

The performance indicators for *Output IV* are number of staff and stakeholders trained (at training courses and through extension activities); number of (relevant) training and extension material produced; and upgrade of technical facilities. The performance targets include (cf. Appendix IV):

- 1000 staff members from stakeholder institutions in the tree seed sector trained in technical subjects through 10 annual training courses with 25 participants per course.

- 4000 user group members reached through extension activities, - 10 extension events per year with min. 100 attendants per event.
- 10-25 technical guidelines/-notes and 20-30 extension briefs/leaflets produced annually, - in total 150-200 publication during the project period.
- Technical facilities of partners upgraded.

Training needs were assessed, an extensive training plan prepared, which include outsourcing of a number of training courses to Ethiopian training institutions. This is done to expand the PATSPO training programme to better meet the needs. An application-provision strategy has been put into practice, a number of training courses held, a number on the job trainings done, a number of technical and extension publications made, and technical facilities of partners upgraded (cf. progress report 2018 and 2019). Upgrade of technical facilities has been added as a performance indicator following the assessment of facilities in 2017/18. All activities will continue in 2021.

## **4 WORK PLAN FOR THE YEAR 2021**

### **4.1 Major Fields of Support**

During the implementation of PATSPO (2017- 2020) the following areas of the Ethiopian national tree seed sector will receive support from PATSPO:

- Tree seed sector developed, including delivery systems [Output 1].
- Tree seed and seedling knowledge and information systems in place [Output 2].
- Existing seed sources upgraded, and new seed sources established (tree genetic resources for the future mobilised and developed) [Output 3].
- Capacity of the national institutions in management of tree genetic resources improved [Output 4].

### **4.2 Planned Activities and Expected Results**

The major PATSPO-activities planned for 2021 are presented in the following four sub-sections. All activities will be developed, implemented and products disseminated as outlined in the PATSPO project document, which includes the overall work plan for the project period. The sub-activities for the year 2021 are listed in the following sections (4.2.1 – 4.2.4). For each of the four project outputs / work packages, the detailed sub-activities and schedules are given in Appendix I.

As year 2021 is the ‘no-cost-extension’ year of PATSPO, the activities presented for each output are: A: Major activities implemented in 2020 and B: Activities planned for 2021 including activities based on agreed recommendations from the MTR. The activities are further detailed in Appendix I (activity plan 2021) and Appendix V (exit strategy).

Appendix V also present the quantitative indicators, and expected deliverables based on different timeframe-scenarios presented.

#### **4.2.1 Output I: Tree seed sector developed, including delivery systems**



A. Major activities planned/implemented in 2020:

- Support to the Tree Seed Network under EFCCC for coordination of major stakeholders activities and information exchange.
- Support provided to preparation/ finalization and publication of ‘tree seed proclamation’ and ‘tree seed policy’ made by EFCCC.

B. Follow-up activities 2021, incl. agreed MTR recommendations:

- Focused support to the Tree Seed Network to play a national informative and coordinating role in the tree seed sector. The specific support activities to be decided in cooperation with DFD/EFCCC
- Support the EFCCC to introduce and promote the tree seed proclamation and the tree seed policy
- Outcome/impact assessment and monitoring evaluation protocol to measure the impact of landscape restoration approaches chosen.
- Work with and support the Directorate of Forest Development (DFD) under EFCCC to ensure major government tree planting programs source the seed through the RTSC and reputed private seed dealers. The specific support measures to be decided in cooperation with DFD/EFCCC.
- Work with and support DFD, CEE-FRC, RTSCs and major (GoE) customers to develop management plans for scaling up seed collection and supply. Order seed one year in advance.
- Implement two annual meetings of the Technical Committee and with a wider representation of stakeholders.
- Prepare for a possible second phase of PATSPO (2022->)

#### **4.2.2 Output II: Tree seed and seedling knowledge and information systems in place**

A. Major activities planned/implemented in 2020:

- Platform for the app on ‘what to plant where’ developed. Identification of priority species identified and described.
- Distribution maps, species descriptions of approx. 150 priority tree species and major layouts of a ‘Climate smart tree species distribution and adaption atlas for Ethiopia’ done.
- Study published on seed development and breeding plans for selected priority species.

B. Follow-up activities 2021, incl. agreed MTR recommendations:

- Interactive seed information portal (APP) on which species to plant where finalized and introduced and promoted.
- Finalize and publish the ‘Climate smart tree species distribution and adaption atlas for Ethiopia’

#### **4.2.3 Output III: Existing seed sources upgraded, and new seed sources established**

A. Major activities planned/implemented in 2020:

- Design of a national breeding programme for 25 species, and breeding plans developed for 15 species based on establishment of Breeding Seed Orchards (BSOs).
- Identification of 8 sites for 27 BSOs for 15 species, and seed procured (national collections from plus trees and imports of single tree- and provenance collections) for all BSOs.

- 27 BSOs of 15 species established at 8 sites.
  - AFE, OFWE and EEFRI trained, supervised and assisted in the establishment of BSOs - ongoing. Training in management of- and data collection/processing/assessing from the established BSO initiated.
  - 130 existing seed sources under the four RTSCs and CEE-FRC described and registered for seed collection by the RTSCs.
- B. Follow-up activities 2021, incl. agreed MTR recommendations:
- Additional 4-5 BSOs/SSOs established, incl. seed procurement, site selection, nursery, planting and fencing.
  - Manual on BSO management published.
  - Manual on measurement, data collection- and analysis for establishing optimal thinning of the BSOs/SSOs published. This manual could eventually be combined with the BSO management manual.
  - 60 additional existing seed sources described and registered for seed collection.

#### **4.2.1 Output IV: Capacity of the national institutions in management of tree genetic resources improved**

- A. Major activities planned/implemented in 2020:
- Rehabilitation, upgrading and maintenance of key facilities at CEE-FRC/TSC, Amhara RTSC, Mekele RTSC, Hawassa RTSC and Dima (Sebeta) RTSC.
  - Training of technical staff and managers from stakeholder institutions in a range of technical disciplines, and management techniques, and follow up assessment of effectiveness of training.
  - Training of (private sector) seed collectors who supply seed to the TSCs in disciplines such as tree selection, collecting techniques and seed cleaning.
- Preparation, publishing and distribution of a substantial amount of training, extension and information material, ref. PATSPO homepage:  
<http://www.worldagroforestry.org/project/provision-adequate-tree-seed-portfolio-ethiopia>
- B. Follow-up activities 2021, incl. agreed MTR recommendations:
- Rehabilitate, upgrade and maintain selected key facilities (see processing area, cold stores, incubators, etc.) of major stakeholder institutions (RTSCs and CEE-FRC), with focus on institutions taking over the maintenance functions.
  - Train staff from stakeholder institutions in the management, incl. measurement, analysis and maintenance/treatment of the BSOs/SSOs established.
  - Implement training courses in management, planning and technical topics in collaboration with Ethiopian course providers, - according to PATSPOs training plan.
  - Train farmer cooperatives (collection seed for the RTSCs) in seed procurement through the RTSCs
  - Prepare and publish training-/extension material for general information and training activities.
  - Train in seed cleaning at the RTSCs and CEE-FRC using seed blowers and other gravity separation equipment available at the RTSCs and CEE-FRC.
  - Support seed testing being fully standardized (ISTA) at all RTSCs and CEE-FRC.

- Support optimizing storage of seed in the cold stores at the RTSCs and CEE-FRC, so only seed requiring cold storage are in the cold stores.
- Provide and train in genebank software and optimal germination protocols.



## **5. INPUTS REQUIRED FOR THE YEAR**

### **5.1 Equipment and Materials**

PATSPO will continue to provide equipment to the TSTC and the RTSCs based on assessed need and through the use of the ‘Provision/Application Strategy’ introduced in 2018. The equipment will be procured from abroad or within Ethiopia. A part of the material will be locally manufactured following descriptions available at PATSPO.

### **5.2 Vehicles**

Six vehicles are procured by the project to service the project and partners. No more vehicles are foreseen to be procured in this phase of PATSPO.

### **5.3 International and National Technical Services**

45 months of international technical assistance for PATSPO are foreseen for 2021 covering the following topics:

1. Finalise the development of a species/seed source selection portal/system – “What to plant where”.
2. Finalise the “Climate smart tree species distribution and adaption atlas for Ethiopia”.
3. Support to the further development of the Tree Seed Network under DFD/EFCCC.
4. On-the-job-training on use of seed lab., seed collection/processing equipment and seed centre procedures.
5. Support to selection and introduction of fully standardized seed testing methodologies and seedbank software (BRAHMS) and optimal germination protocols.
6. Support to finalisation of national tree seed policy and tree seed proclamation.
7. Support to assessment and registration of existing seed sources.
8. Review the domestication status selected tree species and analyse their potential socioeconomic impact.
9. Make designs and layout plans for BSOs 2021.
10. Planning- and field establishment / maintenance and measurement of BSOs/SSOs.
11. Follow-up on establishment, maintenance and use of clonal mother blocks of Baobab, Ziziphus and Tamarind established by PATSPO in Tigray/Amhara Region.
12. Support to reporting and document preparation related to end of project/extension of PATSPO.
13. Senior Team Leader.
14. Introduction of monitoring and evaluation protocol
15. Final review

National consultants will be engaged as deemed necessary when the final ToRs and work plans for the individual technical services are being prepared. A schedule of consultancies for 2021 is presented in appendix II.

## 6. RISK ASSESSMENT

The assessment of risks associated with the implementation of the project follows the Risk Assessment Framework presented in the Project Document and updates during 2018, 2019 and 2020.

The Risk Assessment Framework from the Project Document with an assessment of the defined potential risks as per August 2020 is presented in appendix III. The risk assessment of cross cutting issues updated August 2020 is also given in appendix III.

The single largest risk for continued successful implementation is the corona pandemic. By mid-August 2020, it has had some negative influence on delivery of particular PATSPO Output IV related to capacity building. During the first half of 2020, it has not been possible to implement most of the training activities planned, as the gathering of course participants has not been possible. The other three outputs have mostly been delivered as planned.

For the rest of 2020 and 2021 the corona pandemic could have a more severe negative effect on the PATSPO ability to deliver outputs as planned. PATSPO will monitor the development of the corona pandemic closely based on available information from the GoE, RNE, ICRAF, ILRI and any other sources available. Possible actions to be taken will be decided in close collaboration with EFCCC and RNE.

## 7. CO-ORDINATION, MONITORING AND REPORTING

### 7.1 Co-ordination

*Project co-ordination committees and -teams:*

The focus of the project steering committee (SC) is on matters relating to the agreed framework for project implementation and on policies and actions affecting the project environment and implementation in accordance with the TOR for the SC. The SC will meet twice in 2021 with focus on supporting the implementation of the “no cost extension period” and the possible preparation of a costed phase 2 of PATSPO.

The local management teams (Head of RTSC and PATSPO RTSC Coordinator) in the four provinces (Amhara, Oromia, SNNPR, and Tigray) have the major functions to ensure close contact between the federal and the regional governments, as well as other major stakeholders in the regions. The management teams will also ensure close collaboration within the regions between the project, the RTSCs and the major stakeholders.

The technical coordinating committee (TCC) will ensure coordination, collaboration and information exchange among all major stakeholders involved in technical aspects covered by the project implementation. The technical committee includes representatives from EEFRI, EFCCC, TSTC (under EEFRI), RTSCs, ICRAF, Norwegian Forestry Group (NFG), NGOs, private seed dealers and other relevant organizations.

*Additional co-ordination during the “no cost extension” period - 2021:*

Close contact and co-ordination with EFCCC, DFD, EEFRI, RTSCs and CEE-FRC will be further enhanced in 2021 with emphasis on activities related to “phasing over” of PATSPO activities to the major partners and collaborators, see the exit strategy in section appendix V.

## **7.2 Project Monitoring**

The Project Management Team (PMT) supervises the day-to-day implementation of the PATSPO activities. Overall monitoring of inputs, outputs, progress, and assumptions is similarly undertaken by the PMT, while the PATSPO staff and individual advisers are responsible for monitoring the implementation of specific activities. Monitoring of activities and progress is based on the indicators specified in the performance management framework (appendix IV) and in the Activity Plan and Implementation Schedule (appendix I).

Input and progress monitoring of the RTSCs is undertaken in connection with visits by PATSPO staff and advisers, and as part of the regular planning meetings with TSTC and the RTSCs. The project supports the TSTC and the RTSCs in further developing their monitoring system to meet the requirements of the EFCCC while at the same time feeding into the project’s monitoring system, to meet the requirements of RNE and the Norwegian International Climate and Forest Initiative (NICFI) as well as EFCCC.

Input and progress monitoring of the supported institutions and organisations (TSTC, RTSC, NGOs etc.) will be undertaken regarding visits by project staff and advisers.

The SC plays an important role regarding monitoring of project implementation in accordance with the TOR for the SC. Before each meeting by the SC the project will submit copies of any new reports and technical documents. Part of the SC’s standard agenda will be to review the project progress, including bottlenecks and constraints and ways to overcome these. Both NICFI, represented by the RNE, and GOE, represented by EFCCC, are members of the SC.

## **7.3 Reports Foreseen**

During 2021 the following major PATSPO-reports/publications are foreseen:

- Report from “final review” of PATSPO (if implemented)
- Project document and Grant Agreement for a possible Second Phase of PATSPO (if decided)
- Annual progress report 2020 (March 2021)
- Final Annual Work Plan, 2021 (after Annual Formal Meeting in May 2021)
- Technical reports and guidelines in accordance with the detailed activity plan in appendix I.

## 8. BUDGET IMPLICATIONS FOR THE YEAR

The budget for the “no-cost-extension year” 2021 is based on the remaining amount of funds from the total budget for PATSPO (ref. Grant Agreement) as per end of 2020, ref. also Appendix V prepared in consultation among EFCCC, RNE and ICRAF. The budget has been approved in connection with the approval of the No-cost Extension Agreement signed by RNE and ICRAF in early December 2020.

<b>Budget PATSPO 2021 (USD)</b>	
Budget line by type	Proposed Budget 2021
<b>Project staff</b>	
Senior Technical Staff Team	160.000
ICRAF staff Ethiopia	310.000
ICRAF staff Nairobi	310.000
<b>International Services</b>	
International Technical Assistance Services	325.000
<b>Operation</b>	
External monitoring and evaluation	45.000
Technical operational collaboration local institutions (Ethiopia)	180.000
Travel and DSA (Ethiopia)	70.000
Travel and DSA (ICRAF)	40.000
Travel and DSA (ITA)	50.000
Laboratory costs	100.000
Vehicles	50.000
Equipment	80.000
Training courses	80.000
Communications	80.000
Establishment and maintenance (BSOs)	80.000
Other operation (meetings, seminars, study tours)	40.000
Other operation (petrol and car maintenance)	30.000
Other operation (field work allowances)	18.000
Other operation (water supply)	20.000
Other operation (purchase seed & cultivars)	20.000
Sub-total staff costs	<b>780.000</b>
Sub-total services	<b>325.000</b>
Sub-total operational costs	<b>983.000</b>
Total	<b>2.088.000</b>
Programme administration 5%	<b>104.400</b>
<b>Grand total</b>	<b>2.192.400</b>

## Appendix I: PATSPO Activity Plan and Implementation Schedule (2021 AWP)

Output I. Tree seed sector developed, including delivery systems.																
Main activity I.1 Seed sector assessment: Assessment of the tree seed sector.				Year 2021												
Sub-Activity	Expected Result	Inputs	PERSON(S) RESPONSIBLE <sup>1</sup>	J	F	M	A	M	J	J	A	S	O	N	D	Remarks
I.1.1 Survey existing established seed sources in Ethiopia. An ongoing activity implemented by the RTSC and FRC with technical and financial support from PATSPO.	Overview of seed production capacity and support to the establishment of a national tree seed source register.	Consultants, PATSPO/ PATSPO/ ICRAF staff.	RTSC, NGOs and students. <u>SM, AA, GE, CTN</u> , RTSC- Coordinators													National Tree Seed Source Register to be compiled by EEFRI, - inputs from PATSPO
I.1.2 Implement workshop for presentation and discussion of results from the tree seed sector assessment. <b>Activity finalized in 2019</b>	Data necessary for development of the sector.	Consultants, PATSPO/ PATSPO/ ICRAF staff.	<u>JPL, AD</u> RTSC, NGOs and students. (KH, SM)													
I.1.3 Make a critical analysis of seed supply/seed demand situation in Ethiopia. <b>Activity finalized in 2019</b> and results presented a part of activity I.1.2	Seed demand/supply scenarios, incl. support to seed procurement plans at regional and national levels.	Consultants, PATSPO/ PATSPO/ ICRAF staff.	<u>JPL, AD</u> (KH, SM)													

<sup>1</sup> List of staff and consultants given at the end of the table (page 30)



[illegible]

Main activity I.4 Market intelligence and input supply systems: Demand-supply scenarios developed for all tree species priority groups, based on which location and size of seed sources to be established can be determined, and quality material promoted through the most appropriate channels of supply.	Year 2021												Remarks			
	Sub-Activity	Expected Result	Inputs	PERSON(S) RESPONSIBLE	J	F	M	A	M	J	J	A		S	O	N
I.4.1 Prepare plan for optimal seed supply/demand situation for 10 priority spp. using potential vegetation map of Ethiopia, spp. distribution maps and seed demand/supply data.  PATSPo will support EEFRI and EFCCC to prepare annual seed procurement plans to meet the demand from the GoE’s large tree planting programmes, incl. seed of indigenous species.	Plans for optimal tree seed demand/supply of 10 priority spp.	Consultants, PATSPo/ ICRAF staff.	Stepha M. SM, LGR, KH													
I.4.2 Finalize site selection for BSO/SSO establishments of 2-3 priority species 2021, in collaboration with AFE, OFWE, EEFRI, and the RTSCs.	Sites selected and described for BSO/SSO establishments 2021.	AFE, OFWE, EEFRI and the RTSCs. Consultants, PATSPo/ ICRAF staff.	AA, GE, CTN. SM, KH													In 2021 priority will be given to measure and maintain the established BSOs/SSOs, - including finalisation of manuals.



## Output II. Tree seed and seedling knowledge and information systems in place.

Main activity	Year 2021											Remarks				
II.1	Sub-Activity	Expected Result	Inputs	PERSON(S) RESPONSIBLE	J	F	M	A	M	J	J	A	S	O	N	D
II.1.1	Compile data on distribution of the priority tree species from various sources (EBI, Univ. of A.A., RTSCs, FRC, etc.)	Data on distribution of priority spp. resulting in more accurate spp. distribution maps.	Consultants, PATSPO/ ICRAF staff, CEE-FRC, EEFRl, funds.	<u>RK</u> (KH, SM)												
	Data feeding into preparation of spp. distribution maps and “Climate atlas for tree species of Ethiopia/Africa” (II.1.2) and species/seed source selection portal/system – “What to plant where” (II.4.2).															
II.1.2	Prepare distribution maps for up to 150 priority tree species and a” Climate Atlas for tree species Ethiopia/Africa”.	Distribution maps of priority spp. for use in conservation, tree improvement and seed procurement activities. Will be made available in electronic format and used in the “Climate atlas for tree species of Ethiopia/Africa”.	Consultants, PATSPO/ ICRAF staff, FRC, EEFRl.	<u>RK</u> (KH, SM)												



[illegible][illegible]

[illegible]



[illegible]

**Output IV. Capacity of the national institutions in management of tree genetic resources improved.**

[illegible]





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ITA/TA persons for PATSPO activities 2021

Initials	Name	ICRAF HQ	ICRAF Eth.	UCPH	EFFRI
GE	Girma Eshete				
KH	Kiros Hadgu				
AA	Abrham Abiyo				
CTN	Carsten Tom Norgaard				
AD	Abayneh Derero				
JPL	Jens-Peter Lillisoe				
WT	Wubalem Tadesse				
YM	Yigardu Mengesha				
LGR	Lars Gaudal				
AK	Antoine Kalinganire				
SM	Soren Moestrup				
St.M	Stepha McMullin				
RK	Roeland Kindt				
HP	Hendra Prasad				
FP	Fabio Pedercini				
OKH	Ole Kim Hansen				
JKH	Jon Kehlet Hansen				
PE	Poul Elgaard				
AS	Arvid Sloth				
SiM	Sime Mekdes				
LS	Lars Schmidt				

## Appendix II: Scheduling of Technical Assistance Services to PATSPO 2021

Technical Service	Duration in mm	Timing during the year											
		Jan mm	Feb mm	Mar mm	Apr mm	May mm	Jun mm	Jul mm	Aug mm	Sep mm	Oct mm	Nov mm	Dec mm
1. Finalise the development of a species/seed source selection portal/system – “What to plant where”.	4 months		xxxx	xxxx	xxxx					xxxx			
2. Finalise the “Climate smart tree species distribution and adaption atlas for Ethiopia”.	4 months	xxxx	xxxx	xxxx						xxxx			
3. Support to the further development of the Tree Seed Network under DFD/EFCCC.	2 months		xxxx								xxxx		
4. On-the-job-training on use of seed lab., seed collection/processing equipment and seed centre procedures	2 months			xxxx							xxxx		
5. Support to selection and introduction of fully standardized seed testing methodologies and seedbank software (BRAHMS) and optimal germination protocols.	2 months	xxxx			xxxx								
6. Support to finalisation of national tree seed policy and tree seed proclamation.	1.5 months				xx	xxxx							
7. Support to assessment and registration of existing seed sources	1 months			xxxx									
8. Review the domestication status selected tree species and analyse their potential socioeconomic impact	3 months						xxxx	xxxx	xxxx				
9. Make designs and layout plans for BSOs 2010	1 months					xxxx							

Technical Service	Duration in mm	Timing during the year											
		Jan mm	Feb mm	Mar mm	Apr mm	May mm	Jun mm	Jul mm	Aug mm	Sep mm	Oct mm	Nov mm	Dec mm
10. Planning- and field establishment /maintenance and measurement of BSOs/SSOs	8.5 months		xxxx	xxxx		xxxx	xxxx	xxxx	xxxx	xx	xxxx	xxxx	
11. Follow-up on establishment, maintenance and use of clonal mother blocks of Baobab, Ziziphus and Tamarind established by PATSPO in Tigray/Amhara Region.	2 months			xxxx	xxxx								
12.Support to reporting and document preparation related to end of project/extension of PATSPO	1 months									xxxx			
13. Senior Team Leader	9 months	xxxx	xxxx	xxxx	xxxx	xxxx				xxxx	xxxx	xxxx	xxxx
15. Introduction of monitoring and evaluation protocol	1 months			xxxx									
14. Final review	3 months	xx xx	xxxx xxxx										
<b>Total</b>	<b>45</b>	<b>4</b>	<b>7</b>	<b>8</b>	<b>4.5</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>4.5</b>	<b>4</b>	<b>2</b>	<b>1</b>

**x = Approx. 1 week**

### **Appendix III: PATSPO Risk Assessment Framework**

The Risk Assessment Framework (RAF) is presented in the project document (page 38-40). Following the first formal meeting between RNE and the project in May 2018 (in accordance with the grant agreement), the RAF was expanded with respect to output IV with three specific factors. It was further decided that monitoring of RAF should also apply to the cross-cutting issues described in the project document (page 35-37). The cross-cutting themes covered in the project document are: Climate change and environment, institutional capacity, women's rights and gender equality, anti-corruption, and human rights. To these were added the risk of conflict in Ethiopia and a risk of un-realistic planning.

The issue of political unrest is mentioned in annex 9 of the Project Document. The recent periods of unrest mid 2020 in Ethiopia have not prevented any major field operations of the project so far, although visits to some areas have been adjusted in time to avoid any potential problems. Communication has in general not been hindered either, although periods with no internet and no phone calls have occurred at times. The project plans for 2017 were unrealistic in particular with respect to recruitment of local staff, delivery of international services and the baseline survey to be provided. This has since then not been a major risk, but in order to make sure that it is monitored it has been added as a risk factor.

Below follow therefore three tables:

- The original RAF with a status assessment of August 2020
- RAF for three issues identified during inception with a status assessment of August 2020
- RAF for cross-cutting themes with a status assessment of August 2020.

A full status assessment at the end of 2020 will be included in the progress report for 2020 (May 2021).

RISK ASSESSMENT FRAMEWORK from PATSPO Project Document, STATUS AS PER AUGUST 2020						
Planning Level	Relevant factors	Risk indicators/ effects	Risk probability (without project intervention)	Response/ Mitigation	Risk probability assessed November 2019	August 2020 (update, incl. 'Corona')
<u>Impact:</u> Ethiopia's national forest restoration targets for the next 20 years and beyond are reached.	Substantial areas of landscapes restored	Lack of political support to landscape restoration  Lack of stakeholder interest and involvement in landscape restoration	Medium/ low	GOE strongly committed to landscape restoration (Born Challenge and INDC) which is embedded in the CRGE.  The landscape restoration leads to higher production potential and thus directly benefits the stakeholders.	Political support and stakeholder interest still high.	The Corona situation in Ethiopia has not yet lead to any change of the risk assessment. The development will be monitored closely.
<u>Outcome:</u> Tree seed sector in Ethiopia enabled to provide high quality tree seeds of priority species for large-scale restoration plantings.	Availability of quality tree seed in quantities to meet the demand.	Quality and quantity of tree seed not sufficient to meet demand  Low transparency and lack of quality control in the tree seed sector.	Medium/ high	The TSTC, the four regional tree seed centres and a number of private tree seed dealers form a solid institutional foundation from where the project can support the expansion of the quantity and quality of tree seed being procured. The tree seed sector analysis and the additional project support to normative functions of the government institutions as well as the overall focus on quality will provide for transparency and quality control	Sufficient tree seed seems to be available, thus room for improvement of quality and quality control.	The Corona situation in Ethiopia has not yet lead to any change of the risk assessment. The development will be monitored closely.
<u>Output I:</u> Tree seed sector developed, including seed delivery systems.	Policies and strategies on tree seed. Tree seed network and forum for stakeholders in the tree seed sector.	Facilitating and supporting strategies on tree seed lacking and cannot be developed. A functional tree seed network and forum is lacking and cannot be formed.	Medium/ high	The support and dedication of the EFCCC and TSTC towards improving the seed procurement system together with the experience brought into the tree seed sector by the project.	Assessment of risk not yet applicable.	The Tree Seed Network is well established and the tree seed policy and – proclamation to be finalised 2020-2021.

RISK ASSESSMENT FRAMEWORK from PATSPO Project Document, STATUS AS PER AUGUST 2020						
Planning Level	Relevant factors	Risk indicators/ effects	Risk probability (without project intervention)	Response/ Mitigation	Risk probability assessed November 2019	August 2020 (update, incl. 'Corona')
<u>Output II:</u> Tree seed and seedling knowledge and information systems in place.	Maps and recommendation domains. Decision support system and interactive information portal	Adequate recommendations and guidelines are absent, and the supportive tools and systems are not being developed and put into operation.	High	The key institution (TSTC) is staffed with highly qualified staff and substantial work related to mapping is already being done. Support from the project will further develop the tools and ensure they are put into operation (cf. also output IV).	Species distribution data compiled and maps and 'atlas' under preparation. Stakeholder interest high.	The 'atlas' and the 'what to plant where app to be finalised in 2021.
<u>Output III:</u> Existing seed sources upgraded, and new seed sources established (Tree genetic resources for the future mobilized and developed).	National breeding programme.  Range wide collections of priority species.  Breeding seedling orchards (BSO/SSC)	Breeding programme, collections and establishment of BSOs/trials/production areas will not be established at sufficient scale.	High	The capacity of TSTC, the dedication of the regional tree seed centres and the vibrant private tree seed sector together with the technical- and funding input from the project will ensure mentioned outputs.  The seed sources will be established on land under the control of and close to the institutions being part of the tree seed sector (TSTC, PSE, NGOs, etc.)	Registration of tree seed sources initiated as a continuous activity at the four RTSCs. Five BSOs established in 2018, - 14 to be established in 2019.	Registration of tree seed sources came to a temporarily halt March 2020 due to the corona situation. Five BSOs established in 2018, - 14 to be established in 2019 and 14 planned for 2020.
<u>Output IV:</u> Capacity of national institutions in management of tree genetic resources improved.	Qualified staff at national tree seed institutions and private seed dealers.	Qualified staff not available at scale.  Trained staff will not remain within the tree seed sector.	High	The project will be based on a thorough 'training needs assessment' and develop and implement comprehensive capacity development at all levels in the public and private sectors.  Substantial training-/capacity development activities done by PATSPO and in collaboration with national universities and training institutions.	Motivated staff at key national tree seed institutions available for upgrading through support from PATSPO.	No change; progress in relevant activities continue

### The following three situations, as per June 2018, pose a risk for less optimal implementation of PATSPO

Additional risk factors related to output IV identified during inception, status as per February 2019						
Planning Level	Relevant factors	Risk indicators/ effects	Actual situation posing a risk	Recommended action	PATSPO response	Aug. 2020 (update incl. 'Corona')
<u>Output IV:</u> Capacity of national institutions in management of tree genetic resources improved.	Qualified staff at national tree seed institutions and private seed dealers.	Qualified staff not available at scale.	No staff appointed at the RTSC in Mekele.	Staff to be employed by the local authority without delay at the RTSC in Mekele. Full cadre of staff employed in 2018.	PATSPO provided extra technical support and training to Mekele RTSC in 2018 and now the centre is developing nicely.  NOT a risk anymore as per mid- 2018.	No change
	Maintenance of equipment and facilities at CEEFRC and RTSCs in Hawassa and Mekele, which are under central- or regional public administration	Government/ institutional budget/ finance not available for maintenance	The centres cannot operate, as essential facilities and equipment are not working (cold stores, generators, etc.)	The centres allowed retaining income by their respective authority as part of their budgets	Maintenance plans and initial repairs are implemented, whereas in the longer-term maintenance will depend on the ability of centres' own management capacity and budget. Mekele RTSC (under Bureau of Agriculture) has sufficient budget for maintenance, now after the centre became operational in 2018.	No change
	Sufficient and clean space at centre compounds, -offices and other facilities.	Centre compound, offices and storerooms full of old not functioning equipment (vehicles, equipment, tyres, etc.)	Not sufficient space for the centres' operations and not a good working environment.	Discard old and not functioning equipment and material from the centres and their compounds.	Consider the recommended action to be conditional for delivery of new equipment and vehicles with support from PATSPO. RTSCs in Bahir Dar and Mekele well maintained during 2019.	No change



# **Risk assessment of cross cutting issues – from PATSPO Project document March 2017 (Updated status August 2020)**

<b>Cross-cutting theme</b>	<b>Relevant factors</b>	<b>Risk indicators/ effects</b>	<b>Risk probability (without project intervention)</b>	<b>Response/ Mitigation</b>	<b>Risk probability (during/ after project intervention)</b>	<b>August 2020 (update, incl. 'Corona')</b>
Climate change and environment	Species selection, recommendation domains, resource mobilisation	In-appropriate matching to site and purpose, loss of productivity, invasiveness, loss of biodiversity.	High	Application of evidence-based response models, and policies for appropriate use of genetic resources, including invasive alien species.	Low	No change
Institutional capacity	Delivery of seed and seedlings (sub-sector functioning)	'Un-conscious' delivery of in-appropriate material	High	Developing an enabling regulatory framework and a collaborative seed supply network. Building capacity to sustain such application.	Low	No change
Women's rights and gender equality	As above	As above	Medium/high	As above	Low	No change
Anti-corruption	Financial sustainability	Fiduciary risk (money used for un-intended purpose, not providing adequate return, not adequately accounted for)	Medium/high	Adequate financial management implemented. Fraud prevention, monitoring and response policy adhered to	Low	No change
Human rights	Beneficiaries Stakeholders Partners	Lack of involvement, inadequate benefit sharing, violation of tenure and traditional rights	Medium	Application of the Stakeholder Approach to Risk-informed and Evidence based Decision making (SHARED) approach and a set of relevant safeguard policies	Low	No change

<b>Cross-cutting theme</b>	<b>Relevant factors</b>	<b>Risk indicators/ effects</b>	<b>Risk probability (without project intervention)</b>	<b>Response/ Mitigation</b>	<b>Risk probability (during/ after project intervention)</b>	<b>August 2020 (update, incl. 'Corona')</b>
Violent conflicts within Ethiopia	Project implementation, - in particular at field level	Hindering of movements, communication and implementation of project activities	Medium	Follow the development and recommendations of the security situation in Ethiopia through the ILRI security monitoring modality	Medium	No major change. To be monitored closely.
Unrealistic project planning (PATSPo)	Less optimal implementation of the PATSPo Project	Financial implications and lesser degree of timely delivering of the project outcomes, results and outputs.	NA	More focus on planning based on previous year's implementation of the project activities and more realistic estimates of activity costs.	Low	No change

## Appendix IV: Updated Performance Measurement Framework (by end 2018 and mid-2020, baseline added November 2018)

The Performance Management Framework (PMF) is presented in the project document (page 30-33 and annex 1, page 42-43). The PMF here is updated to provide for qualitative and quantitative assessment. First annual assessment by end 2018 was part of the progress reporting for 2018 (March 2019, updated June 2019 following annual formal meeting).

Status by end 2020 will be part of progress for 2020 (March 2021). A preliminary qualitative update as of August 2020 is given in the column to the right.

Planning Level	Performance indicators	Performance Targets	Baseline	Status by end 2018	Means of Verification	Verification Frequency	Responsibility	August 2020 (update incl. corona)
<i>Impact</i> Ethiopia's national forest restoration targets for the next 20 years and beyond are reached	Area restored using quality tree seedlings raised from quality seed	Increase the area restored using quality tree seedlings raised from quality seed from current levels of close to none to about half of the annual restoration area or around 0.5 million ha at the end of the project period. Quality measures defined in the monitoring and evaluation protocol.	Area restored using quality tree seedlings 2017: 0 ha (0 %)	3.55 billion seedlings planted in 2017 (663,777 ha) and 4.27 billion seedlings planned for 2018 (1,000,000 ha). Data from seed sector assessment report. Quality aspect difficult to assess. See elaborated status under the table at page 42.	Assessment reports based on data from EFCCC and other government institutions.	Yearly	ICRAF/EFCCC	Level of 2019 and 2020 similar to 2018

Planning Level	Performance indicators	Performance Targets	Baseline	Status by end 2018	Means of Verification	Verification Frequency	Responsibility	August 2020 (update incl. corona)
<u>Outcome</u> Tree seed sector in Ethiopia enabled to provide high quality tree seeds of priority species for large-scale restoration plantings.	Amount of quality tree seed of priority species made available (produced and delivered) for restoration plantings in Ethiopia	Increase the amount of quality tree seed of priority species from current level of close to none to about half of the demand for the annual restoration programme. Quality measures defined in the monitoring and evaluation protocol.	Amount of quality tree seed of priority species used for restoration: 0 kg (0%)	54 tons of seed supplied from the RTSC in 2017, which correspond to max. 30 % of all seed used in 2017. We assume/ conclude that 30 % off seed used are of better quality. Data from seed sector assessment report.	Assessment reports based on data and statistics from stakeholders in the tree seed sector in Ethiopia.	Yearly	ICRAF/ TSTC	Level of 2019 and 2020 similar to 2018
<u>Output I:</u> Tree seed sector developed, including seed delivery systems	Tree seed delivery system elements in place.	Assessed and upgraded strategies and policies for the tree seed sector in place, - done in close collaboration with MEFC. Target: government policy recommended.	No official government policy exists.	PATSCO prepared a report on status of and recommendations for tree seed policies for the tree seed sector. PATPO provided inputs to EFCCC' development of new tree seed act. Long process.	Analysis reports. Technical reports. System reports. Seminar- and meeting reports.	Yearly	ICRAF/ TSTC	Network and policy are in further progress
		Demand and supply scenarios in place.	No demand-supply scenarios exist.	PATSCO supports development of demand-supply scenarios in 2019, based on seed sector assessment report and species distribution maps.				2019 activity delayed till 2020/2021

Planning Level	Performance indicators	Performance Targets	Baseline	Status by end 2018	Means of Verification	Verification Frequency	Responsibility	August 2020 (update incl. corona)
		Established and well-functioning tree seed network and – forum for the tree seed sector in place.	No tree seed network and forum exist.	PATSPo is waiting for initiative from EFCCC.				Network has been established and is in further progress
<i>Output II:</i> Tree seed and seedling knowledge and information systems in place	Technical knowledge and information system for the tree seed sector available.	Maps and related tree planting recommendation domains covering all regions of Ethiopia in place. Target: 150 species.	No species-specific maps exist.	15 maps to be finalised/printed first half of 2019.	Manuals for the systems. Technical reports. Progress reports on use of the systems and knowledge	Yearly	ICRAF/TSTC	Atlas of 150 species in progress. 9 posters prepared in 2019
		Species/seed source selection portal/system (“What to plant where”) in place. Target: A portal covering tree species of Ethiopia	No portal is available.	To be prepared in 2020 according to plan.				To be initiated in 2020
		Field trials/BSOs to support development of superior seed sources in place and analysed.	No BSOs exist. A baseline of existing field trials will be prepared in 2018.	5 BSOs established in 2018. Report on assessment of existing field trials made in 2018.				Additional orchards established – 14 planned for 2020.
		Genomic studies of priority species to support development of superior seed sources performed.	No species at present covered by genomic studies.	The possible role of genomic tools in tree breeding in Ethiopia will be assessed in 2019. Conclusions in 2020.				Assessment of genomic tools initiated Nov/Dec 2019

Planning Level	Performance indicators	Performance Targets	Baseline	Status by end 2018	Means of Verification	Verification Frequency	Responsibility	August 2020 (update incl. corona)
<u>Output III:</u> Tree genetic resources for the future mobilized and developed	National tree breeding programme formulated	National tree breeding programme, incl. BSOs, for priority tree species covering 80-90 % of the seed demand (base of seed sources).	No national breeding programme exist. Baseline of existing species-specific programmes will be prepared in 2018.	Baseline prepared and note on specific breeding plans for two species ( <i>Eucalyptus globulus</i> , <i>Afrocarpus falcatus</i> ) prepared.	Breeding programme documents. Seed source assessments/descriptions. Seed source/BSO/SSO establishment reports. Seed collection reports.	Yearly	ICRAF/TSTC/PSEs/NGOs	In progress as planned
	Number of new seed sources (BSOs) established and in use.	75-150 BSOs/SSOs of the priority tree species established.	No BSOs/SSOs exist.	5 BSOs established in 2018				Additional orchards established – 14 planned for 2020.
	Number of existing seed sources upgraded and in use.	4-500 seed sources identified and described in existing forests and plantations throughout Ethiopia.	Existing seed sources are generally not described	Approximately 60 seed sources identified and registered in 2018.				Registration of seed sources continues. Temporarily at halt March 2020 (Corona)
	See outcome	Between 250 - 1000 tons of quality tree seed of priority species procured annually by the tree seed sector, ref. section 10a in the Project Document.	Quality of current supply is not documented	Difficult to assess the quality of tree seed procured. 30 % of all seed used in Ethiopia comes from RTSCs and is likely of better quality.				No change

Planning Level	Performance indicators	Performance Targets	Baseline	Status by end 2018	Means of Verification	Verification Frequency	Responsibility	August 2020 (update incl. corona)
<u>Output IV:</u> Capacity of national institutions in management of tree genetic resources improved	Number of staff and stakeholders trained (at training courses and through extension activities).	1000 staff members from stakeholder institutions in the tree seed sector trained in technical subjects through 10 annual training courses with 25 participants per course.	0	Approximately 150 trained by end 2018.	Training course reports. Guidelines, training- and extension material published.	Yearly	ICRAF/TSTC/PSEs/NGOs	250 trained by March 2020. Training activities at halt due to corona.
		4000 user group members reached through extension activities, - 10 extension events per year with min. 100 attendants per event.	0	Training of farmers and farmer groups to start in 2019.				
	Number of (relevant) training- and extension material produced.	10-25 technical guidelines/notes and 20-30 extension briefs/leaflets produces annually, - in total 150 - 200 publication during the project period.	0	More than 130 technical guides, reports, leaflets, posters and flip overs published by end 2018 and early 2019.				Approx. 130 technical guides, reports, leaflets, posters and flip overs published by end 2018 and early 2019.

The seed sector assessment undertaken by PATSPO estimates that 30% of all tree seed, being used in Ethiopia at present, is procured by the formal tree seed sector (the RTSCs, FRC and other research institutes) whereas 70 % is procured by the informal sector (private seed dealers, exchange between farmers, etc.). The tree seed procured by the formal sector is of higher quality, in particular regarding physical and physiological quality, than those procured by the informal sector. PATSPO is focusing most of its support to formal sector through seed source selection and registration, and establishment of new high-quality seed production areas (BSOs/SSOs). The strategy of PATSPO is to support the tree seed sector to, at any time, deliver the best possible tree seed, while at the same time continuously improving the quality.

## Appendix V.

### Exit strategy PATSPO 2021

#### Introduction

PATSPO was reviewed early 2020 and the MTR Report, related Management Response Matrix (MRM) and an Extension Note prepared by PATSPO were discussed and follow-up agreed upon by EFCCC and RNE, and with inputs from PATSPO/ICRAF, at two Zoom meetings, both held on the 15<sup>th</sup> June 2020 (Extension Meeting and Annual Meeting), ref. minutes from both meetings.

The overall conclusion from the MTR was that PATSPO is a project that supports the GOE's in fulfilling its ambitious plans for restoration of degraded land and tree planting in general. The project is well designed, well implemented and delivers most of the outputs and outcomes.

The MTR Report recommends a second phase of PATSPO:

“A second phase of the project could be seriously considered by the Government of Ethiopia and the funders as, in our opinion, this would considerably strengthen PATSPO outcomes, and positive impacts on the tree seed sector in Ethiopia”.

EFCCC, RNE and PATSPO/ICRAF agreed to recommend a one-year ‘no-cost-extension’ (2021). During 2021 a costed extension starting from 2022 will be discussed between EFCCC and the RNE. The major reasons for a one-year “no-cost-extension” of PATSPO are: i) The start of the project was delayed for 6 months and ii) the present corona pandemic has delayed some activities of the project and iii) to ensure a smooth handing over of project activities to GoE - should a costed extension from 2022 not be decided.

The preparation of no cost extensions of ongoing projects is presented in the PATSPO Grants Agreement (ETH-16/0018) between NICFI/RNE and ICRAF.

#### Objective

The objective of the Exit Strategy is to ensure and support the EFCCC and other major stakeholders of PATSPO to be more involved in and take over implementation of the major activities of PATSPO from 2021.

If this is successfully done, it will contribute to sustain some of PATSPO's achievements (as outlined below), if the project should be terminated by end 2021. At the same time it will indicate the GOE's commitment to the tree seed sector and thus form the basis for the RNE and GOE to discuss and decide on a possible second costed phase of PATSPO starting from 2022.

#### Type of exit, planning, implementation and timeframe (incl. involvement of partners)

The strategy of PATSPO has from the start been to support the GOE in promoting strengthening of existing tree seed organisations, through the provision of relevant information related to all aspects of seed procurement to the major tree seed producers/users and to enhance collaboration (establish a network) between institutions engaged in research and development within the fields of tree seed



technology, tree improvement and gene resource conservation. The general principle of the strategy has been to build on all existing elements of the existing national tree seed organisations, this is valid for structures as well as for procedures and is perceived in support of ensuring quick impact of the project as well as sustainability of the project activities.

During the first three years of the PATSPO the responsibility of the various tasks of the project has gradually been allocated to partner institutions.

In this way, the sustainability aspects have been built into the implementation modality of the project from the very start. Therefore, the exit strategy is not about *phasing out* the activities, but *phasing over* the activities to relevant institutions and organisations in Ethiopia.

Consequently the exit strategy is focusing on the core achievements and activities of PATSPO and how best to ensure these being taken over by national institutions.

Following the Project Document for PATSPO, the following activities and implementation modalities have been implemented to sustain the project achievement and the continuation of activities after its termination:

- The design and implementation of the project is based on existing institutional structures.
- The responsibility of the various tasks of the project has been allocated to partner institutions.
- Specific agreements with stakeholders has been made (e.g. contract for specific work)
- The capacity-building component of the project has provided a coherent training and extension programme.
- The development of the legal (regulatory) framework of the tree seed sector (Tree Seed Strategy and Tree Seed Proclamation)
- The coordination and information to take place through the ‘FLR information sharing forum’ and the ‘tree seed network’, - now combined into the Tree Seed Network (TSN).

#### Exit-activities, involved/responsible institutions, timing and indicators/monitoring

The “exit activities” includes selected ongoing PATSPO activities to be phased over as well as specific activities related to and insuring the “phasing over” of the ongoing PATSPO activities.

In addition to defining the major PATSPO activities to be phased over (more involvement of partner institutions), it is equally important to define how they should be phased over and when during 2021. Further, the indicators for phasing over have to be identified and their monitoring are important to describe and implement.

The specific activities related to the exit strategy, their implementation and timeframe, etc. are presented in the table below, while at the same time being part of the AWP 2021, ref. Appendix I.

Exit activity	Participating institutions (responsible underlined)	When will it be done in 2021	Indicators	Monitoring institution	Budget required	Budget from where
<b>Output 1: Tree seed sector developed, including delivery systems</b>						
Focused support to the Tree Seed Network to play a national coordinating role in the tree seed sector.	<u>DFD</u> , <u>EEFRL</u> , <u>PATSPO</u>	Jan. – Dec.	Plans, proposals, budgets, ‘telegram’, homepage.	<u>PATSPO</u> , <u>DFD</u>	Yes	<u>PATSPO</u> , <u>DFSC</u>
Support the EFCCC to introduce and promote the tree seed proclamation and the tree seed policy	<u>DFD</u> , <u>EEFRL</u> , <u>PATSPO</u>	Jan. – Jun.	Drafts/final proclamation and policy. <u>PATSPO</u> consultant.	<u>PATSPO</u> , <u>DFD</u>	Yes	<u>PATSPO</u> , <u>DFD</u>
Introduction of outcome/impact assessment and monitoring and evaluation protocol	<u>PATSPO</u> , <u>DFD</u>	Feb. - May.	Seminar.	<u>PATSPO</u>	Yes	<u>PATSPO</u>
Work with and support the Directorate of Forest Development (DFD) under EFCCC to ensure major government tree planting programs source the seed through the RTSC and reputed private seed dealers.	<u>DFD</u> , <u>EEFRL</u> , <u>PATSPO</u>	Jan. – Oct.	Documentation of seed ordered and used by nat. planting programmes.	<u>DFD</u> , <u>EEFRL</u> , <u>PATSPO</u>	Yes, for purchase seed	GoI planting programmes
Work with and support DFD, CEE-FRC, RTSCs and major (GoE) customers to develop management plans for scaling up seed collection and supply. Order seed one year in advance.	<u>DFD</u> , <u>EEFRL</u> , <u>PATSPO</u>	Jan. – Oct.	Plans for seed purchase and related budgets	<u>DFD</u> , <u>EEFRL</u> , <u>PATSPO</u>	Yes, for purchase seed	GoI planting programmes
Implement two annual meetings of the Technical Committee and with a wider representation of stakeholders.	<u>PATSPO</u> , <u>DFD</u> and major partners.	Jan. - Oct.	Agenda and minutes from meetings.	<u>PATSPO</u>	Yes.	<u>PATSPO</u>
Prepare for a possible second phase of <u>PATSPO</u> (2022->)	<u>EFCCC</u> , <u>RNE</u> , <u>PATSPO</u>	Sep. – Dec.	Pro. Doc and Grant Agreement	<u>EFCCC</u> , <u>RNE</u> , <u>PATSPO</u>	Yes.	<u>PATSPO</u>

Exit activity	Participating institutions (responsible <u>underlined</u> )	When will it be done in 2021	Indicators	Monitoring institution	Budget required	Budget from where
<b>Output II: Tree seed and seedling knowledge and information systems in place</b>						
Interactive seed information portal (APP) on which species to plant where finalized and introduced and promoted.	<u>PAT</u> SP <u>O</u> , <u>EEFRI</u>	Jan. – Oct.	Data for the APP, the APP	PATSP <u>O</u>	Yes	PATSP <u>O</u>
Finalize and publish the ‘Climate smart tree species distribution and adaption atlas for Ethiopia’	<u>PAT</u> SP <u>O</u> , <u>EEFRI</u>	Jan. – Oct.	Data for the atlas, the atlas	PATSP <u>O</u>	Yes	PATSP <u>O</u>
<b>Output III: Existing seed sources upgraded, and new seed sources established</b>						
Additional 4-5 BSOs/SSOs established, incl. seed procurement, site selection, nursery, planting and fencing.	PATSP <u>O</u> , <u>AFE</u> , <u>OFWE</u> , <u>EEFRI</u> , <u>MAB</u>	Jan. - Oct.	Seed, nursery data, site records, planting records, etc.	PATSP <u>O</u>	Yes Contracts w. partners	PATSP <u>O</u>
Manual on BSO maintenance published.	PATSP <u>O</u>	Jan. – Oct.	Manual	PATSP <u>O</u>	Yes	PATSP <u>O</u>
Manual on measurement, data collection- and analysis for establishing optimal thinning of the BSOs/SSOs published.	PATSP <u>O</u>	Jan. – Oct.	Manual	PATSP <u>O</u>	Yes	PATSP <u>O</u>
60 additional existing seed sources described and registered for seed collection.	RTSCs, <u>CEE-FRC</u> , <u>EEFRI</u> , PATSP <u>O</u>	Jan. – Nov.	Seed source description, compiled register.	<u>PAT</u> SP <u>O</u> , <u>EEFRI</u>	Yes	PATSP <u>O</u>
<b>Output IV: Capacity of the national institutions in management of tree genetic resources improved</b>						
Rehabilitate, upgrade and maintain selected key facilities (see processing area, cold stores, incubators, etc.) of major stakeholder institutions, with focus on institutions taking over the maintenance functions.	<u>RT</u> SCs, <u>CEE-FRC</u> , PATSP <u>O</u>	Jan. – Nov.	Renovated facilities, maintenance agreements.	PATSP <u>O</u>	Yes	PATSP <u>O</u>
Train staff from stakeholder institutions in measurement, analysis and <u>maintenance</u> of the BSO/SSO established.	PATSP <u>O</u> , RTSCs, partners.	Feb. – Oct.	Course memos.	PATSP <u>O</u>	Yes	PATSP <u>O</u>

Exit activity	Participating institutions (responsible <u>underlined</u> )	When will it be done in 2021	Indicators	Monitoring institution	Budget required	Budget from where
Implement training courses in management, planning and technical topics in collaboration with Ethiopian course providers, - according to PATSPOs training plan.	<u>PATSPO</u> , course providers	Jan. – Nov.	Course agreements, budgets, reports	PATSPO	Yes	PATSPO
Train farmer cooperatives in seed procurement through the RTSCs	<u>RTSCs</u> , <u>PATSPO</u>	Feb. – Oct.	Course plans, budgets, reports	PATSPO	Yes	PATSPO
Prepare and publish training-/extension material.	<u>PATSPO</u>	Jan. – Nov.	Published material	PATSPO	Yes	PATSPO
Train in seed cleaning at the RTSCs and CEE-FRC using seed blowers and other gravity separation equipment available at the RTSCs and CEE-FRC.	<u>PATSPO</u> , <u>EEFRI</u>	Feb. - Oct.	Course reports	PATSPO	Yes	PATSPO
Support seed testing being fully standardized (ISTA) at all RTSCs and CEE-FRC.	<u>PATSPO</u> , <u>EEFRI</u> , <u>RTSCs</u>	Feb. - Oct.	Seed testing protocols	PATSPO	Yes	PATSPO
Support optimizing storage of seed in the cold stores at the RTSCs and CEE-FRC.	<u>PATSPO</u> , <u>EEFRI</u> , <u>RTSCs</u>	Feb. - Oct.	Seed storage protocols	PATSPO	Yes	PATSPO
Provide and train in genebank software and optimal germination protocols	<u>PATSPO</u> , <u>EEFRI</u> , <u>RTSCs</u>	Feb. - Oct.	Software, course reports	PATSPO	Yes	PATSPO

In the table below (from the MTR report) are the PATSPO quantitative indicators, and expected deliveries based on different timeframes presented. The table is made before the corona pandemic started and the future predictions of the expected PATSPO deliveries might need to be updated during the second half of 2020 pending the development of the corona Pandemic.

**PATSPo quantitative indicators, and expected delivery based on different timeframes (data and estimates provided by the PATSPo team)**

<b>Quantitative indicator</b>	<b>Achieved to date (end of 2019)</b>	<b>By end of 2020</b>	<b>By end of 2021 (1 yr no-cost extension)</b>	<b>By end of 2022 (2 yr ext. with additional funding)</b>	<b>By end of 2025 (5 yr ext. with additional funding)</b>	<b>Comments</b>
Output 2: Maps and tree-planting recommendation domains in place for <b>150 species</b>	Maps produced for <b>15</b> species	<b>150</b> species	<b>200</b> species	<b>250</b> species	<b>350</b> species	The species suitability / distribution atlas will be produced by the end of 2020 for publication in 2021
Output 3: National tree breeding programme, incl. BSOs, for priority tree species covering <b>80-90%</b> of the seed demand for the species	Estimate: The species worked with will cover approx. <b>5-10 %</b> of the demand.	Estimate: The species worked with will cover approx. <b>10- 15 %</b> of the demand.	Estimate: The species worked with will cover approx. <b>15 %</b> of the demand.	Estimate: The species worked with will cover approx. <b>15 - 20 %</b> of the demand.	Estimate: The species worked with will cover approx. <b>45 %</b> of the demand.	The existing seed sources registered / described together with the BSO/SSO established will potentially cover the percentages of the seed demand mentioned
Output 3: <b>75-150</b> BSOs/SSOs of priority tree species established	<b>14</b> BSOs of 7 species established, with a further <b>13</b> of 8 species under development	<b>27</b> BSOs/SSOs of <b>18</b> species.	<b>41</b> BSOs/SSOs of <b>27</b> species.	<b>55</b> BSOs/SSOs of <b>36</b> species,	<b>120</b> BSOs/SSOs of <b>60</b> species	Assumes present momentum being maintained and more involvement of partner institutions owning the land where the BSOs/SSOs are being established
Output 3: <b>400-500</b> seed sources identified and described in existing forests and plantations throughout Ethiopia	<b>80</b> existing seed sources under the four RTSCs and CEEFRC described and registered	<b>130</b> existing seed sources under the four RTSCs and CEEFRC described and registered	<b>190</b> existing seed sources under the four RTSCs and CEEFRC described and registered	<b>250</b> existing seed sources under the four RTSCs and CEEFRC described and registered	<b>500</b> existing seed sources under the four RTSCs and CEEFRC described and registered	

<b>Quantitative indicator</b>	<b>Achieved to date (end of 2019)</b>	<b>By end of 2020</b>	<b>By end of 2021 (1 yr no-cost extension)</b>	<b>By end of 2022 (2 yr ext. with additional funding)</b>	<b>By end of 2025 (5 yr ext. with additional funding)</b>	<b>Comments</b>
Output 3: Between <b>250-1000</b> tons of quality tree seed of priority species procured annually by the tree seed sector	<b>60</b> tons of quality tree seed of priority species procured annually by the tree seed sector	<b>110</b> tons of quality tree seed of priority species procured annually by the tree seed sector	<b>180</b> tons of quality tree seed of priority species procured annually by the tree seed sector	<b>250</b> tons of quality tree seed of priority species procured annually by the tree seed sector	<b>1000</b> tons of quality tree seed of priority species procured annually by the tree seed sector	Estimates based on actual procurement levels of the RTSCs and CEEFRC and the presumption that private seed dealer get access to collect seed from seed sources under the RTSCs and CEEFRC
Output 4: <b>1000</b> staff members from stakeholder institutions in the tree seed sector trained in technical subjects through 10 annual training courses with 25 participants per course.	<b>300</b> staff members from stakeholder institutions in the tree seed sector trained	<b>450</b> staff members from stakeholder institutions in the tree seed sector trained	<b>625</b> staff members from stakeholder institutions in the tree seed sector trained	<b>800</b> staff members from stakeholder institutions in the tree seed sector trained	<b>1300</b> staff members from stakeholder institutions in the tree seed sector trained	
Output 4: <b>4000</b> user group members reached through extension activities, - 10 extension events per year with min. 100 attendants per event.	<b>500</b> user group members reached through extension activities	<b>2000</b> user group members reached through extension activities	<b>3500</b> user group members reached through extension activities	<b>5000</b> user group members reached through extension activities	<b>9000</b> user group members reached through extension activities	
Output 4: 10-25 technical guidelines/notes and 20-30 extension briefs/leaflets produces annually, - in total <b>150 - 200</b> publications during the project period.	<b>150</b> guidelines, notes, leaflets, posters, news, publications, etc.	<b>200</b> guidelines, notes, leaflets, posters, news, publications, etc.	<b>250</b> guidelines, notes, leaflets, posters, news, publications, etc.	<b>300</b> guidelines, notes, leaflets, posters, news, publications, etc.	<b>400</b> guidelines, notes, leaflets, posters, news, publications, etc.	

Quantitative indicator	Achieved to date (end of 2019)	By end of 2020	By end of 2021 (1 yr no-cost extension)	By end of 2022 (2 yr ext. with additional funding)	By end of 2025 (5 yr ext. with additional funding)	Comments
Probability of PATSPO-activities being sustainable continued by GoE, i.e. techniques being adapted, additional BSOs being established/maintained, the tree seed sector developing according to the PATSPO strategy)	0 %	0 %	10 %	25 %	70 %	The percentages are “guesstimates” based on 30 + years of working with national tree seed projects in more than 20 countries.









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