

Intermediary report III

"Improvement of the conservation status of *Azelia africana* in Benin" project (ID: 41122-1)



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1. Introduction

Azelia africana is a tree species that plays an important role in forest ecosystems and local cultures. Its presence contributes to soil stability, nutrient cycling, and the regulation of the local climate (Kitin et al., 2021). Moreover, *A. africana* provides vital resources to communities, including animal feed during the dry season, medicinal products, and a source of income (Donkpegan et al., 2020). However, the species is severely threatened by overexploitation, habitat loss due to extensive agriculture, and climate change (Balima et al., 2022).

In this context, it is imperative to adopt effective conservation strategies to ensure the long-term survival of this species. The project "Improvement of the conservation status of *Azelia africana* in Benin" aims to develop conservation and awareness actions to improve its conservation status. It is structured around four specific objectives (SOs):

SO1: Identify habitats favorable for the conservation of *A. africana*,

SO2: Assess the impact of livestock on the demographic structure of *A. africana* populations,

SO3: Assess the perception of local communities on the temporal dynamics and local conservation practices of *A. africana*,

SO4: Raise awareness among local populations for the conservation of *A. africana* in Benin.

Under SO4, it is planned to raise awareness, provide environmental education, and train local communities on sustainable harvesting techniques, as well as reforestation efforts to increase the species' density in habitats favorable to its conservation. This third interim report presents the activities carried out to achieve these objectives.

2. Methodology

We used posters (Photo 1 and 5) and T-shirts with key messages and partner logos (Photo 2) to raise awareness among local populations about the conservation of *A. africana* and its habitats. After the awareness campaign, a hands-on training was organized for participants on sustainable exploitation techniques of the species. Educational games, drawings, and contests focused on *A. africana* were organized for schoolchildren (Photo 3 and 4).



Photo 1. Poster designed to raise awareness and promote environmental education.



Photo 2. Front (a) and back (b) of T-shirts made for environmental education.



Photo 3. Drawing contest focused on *A. africana* and its fruits for schoolchildren.



Photo 4. Training of schoolchildren on drawing techniques of *A. africana* (c) with its fruits (a, b, d).



Photo 5. Use of a poster to raise awareness among schoolchildren about the causes of the disappearance of *A. africana*.

In collaboration with local communities, natural habitats favorable for the conservation of the species were identified, and the produced seedlings were planted in degraded areas. For this first phase of the project, awareness-raising, environmental education, and reforestation activities were strictly carried out in the Sudanian zone of the country due to the high pastoral pressure observed in this area during the survey and forest inventory phases. Thus, 10 villages neighboring the Trois Rivières Gazetted Forests (TRGF; 10°20'-10°45'N and 2°45'-3°40'E) and the Alibori Supérieur Gazetted Forest (ASGF; 10°41'-11°11'N and 2°15'-2°48'E) were chosen (five villages per forest): Nassikonsi, Bessassi, Zambara, Managbasso, Salonzi (for TRGF), and Ningoussourou, Guéssébani, Sèkèré, Yarra, Lougou (for ASGF). These villages were selected due to their close proximity to the forests.

3. Results

3.1. Awareness and training of local communities

We organized 10 awareness sessions (Photos 6 and 7) in the 10 selected villages (one session per village). These sessions brought together stakeholders such as community groups, farmers, herders, sawyers, local NGO workers, and forestry officers. The results of our research were used to raise awareness among participants about the conservation of endangered species and their habitats. After the awareness sessions, hands-on training was organized for participants on sustainable harvesting techniques for the species. The number of participants ranged from 20 to 65 people. During the training, participants were divided into small groups of 5 to 10 to better absorb the lessons (Photo 8). In total, 376 people were sensitized and trained on branch pruning techniques.



Photo 6. Raising awareness among the population of Zambara, a locality located in the immediate vicinity of the TRGF.



Photo 7. Overview of participants after an awareness session.



Photo 8. Training of breeders on pruning techniques for woody forage branches.

3.2. Environmental education for schoolchildren

We conducted educational activities in the primary schools of 10 villages. In collaboration with local authorities, teachers, and directors, we visited each classroom and organized education sessions focused on the conservation of endangered species and their habitats for the students (Photos 9 and 10). A total of 1,600 students were made aware of the conservation of *A. africana* and its habitats.



Photo 9. Raising awareness among elementary school students at the public primary school in Sèkéré, a locality near the ASGF. Dressed simply, the teacher in charge of the class. In T-shirts, A.M. Koutchoro (project lead) and the students.



Photo 10. Environmental education of schoolchildren in Zambara (a) and Bessassi (b).

3.3. Reforestation

We planted 2,600 *A. africana* (1,300 seedlings) and *Khaya senegalensis* (1,300 seedlings) in mixed stands in the degraded habitats of the TRGF only (Photo 11), due to the security situation in the country in the ASGF zone during the reforestation period. We obtained the agreement of the forestry administration for the maintenance and long-term monitoring of the planted seedlings. This is an institution authorized by the Beninese state, which works for the conservation of biodiversity in Benin with the involvement of local communities.



Photo 11. Collection of seedlings from the nursery for reforestation sites (a); seedlings in the nurseries (b); planting of *K. senegalensis* (c) and *A. africana* (d) by A.M. Koutchoro (project lead) and local communities (c) in the TRGF.

Conclusion

The activities of this project have raised awareness and involved 2,356 people in the conservation of *A. africana* and its habitats. They have also strengthened the capacity of these individuals in the techniques for pruning the branches of *A. africana* without impacting the survival of its populations. We planted 2,600 seedlings of *A. africana* and *K. senegalensis* in the degraded habitats of the TRGF. We obtained approval from the forestry administration for the long-term maintenance and monitoring of the planted seedlings.

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