LIFE17 GIE/IT/000561 - GoProFor
GOod PRactices implementation netwOrk
for FORest biodiversity conservation

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Action B5 - Project promotion at European level

Technical Annex MTR.B5.T.04
GoProFor Contribution to the Green Deal

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Beneficiary responsible for implementation:
DREAM

Feedback from LIFE GoProFor experience (LIFE LIFE17 GIE/IT/000561) for the development of a new EU Strategy on Adaptation to Climate Change "The European Green Deal"

The contribution that LIFE GoProFor can give for the development of the Green Deal, and reported in this document, stems from the project's experience achieved to date, which derives mainly from the following activities:

1. the analysis of around 500 forest-related LIFE projects, with the collection to date of 155 forest-related Good Practices;
2. the network with important European institutions and organizations involved in N2000 (DGEnv, Natura 2000 Biogeographical Process, Easme, Europarc Federation, Eurosite, and representatives from 10 Member States) with the aim to implement a European training system in the context of forest management in line with the objectives of the European Directives and N2000;
3. the Italian National Network Table with the involved parties in both forest and RN2000 management (Environment and Agriculture and forests Ministries, Regions, NGO, etc), for the definition of forest habitats management guidelines.

Based on these experiences, the first part of the document highlights the most important aspects that emerged concerning forest management in relation to climate changes and biodiversity, while the second part contains suggestions and proposals for the development of the Green Deal.

1. Best experiences and Good Practices tested within the LIFE Programme

One of the most important issues emerging from many LIFE projects is **the need to improve forest resilience**, through actions that guarantee their adaptability to the CC and consequently improving the conservation of forest biodiversity. In this sense, forest management, including production, can be guided toward the achievement of these objectives.

As effectively tested in FORECCAsT project (LIFE15 CCA/FR/000021), it is necessary to **define tools that support forest management**, able to highlight changes in the climate conditions of forest stations, and to suggest silvicultural choices for the improvement of the adaptive capacity of forests. LIFE PProSpoT (LIFE09 ENV/IT/000087), MixForChange (LIFE15 CCA/ES/000060) and Suber (LIFE13 ENV/ES/000255) highlighted how it is also necessary **to experiment and to apply innovative silvicultural models** (e.g. tree-oriented silviculture), practices and approaches capable to improve the resilience and productive, environmental and social functions of forests, taking also into account the improvement of biodiversity.

Another key element is the **study and monitoring of forest genetic biodiversity**. For example, LIFEGENMON project (LIFE13 ENV/SI/000148) has developed indicators for the monitoring of forest genetics, capable of assessing the ability of forests to adapt to CC, and proposing an alert system for forest populations. BGNATURAGENEFUND (LIFE10 NAT/BG/000146) has developed techniques for *ex-situ* conservation of plants capable of producing offspring with the best genetic heritage for adaptation purposes. Finally, Resilfor (LIFE08 NAT/IT/000371) tested assisted migration techniques for indigenous white fir populations threatened by CC.

Another theme developed in LIFE projects is the implementation of forestry and forest management models aimed at improving specific biodiversity. Biodiversity conservation can indirectly contribute to increase the resilience of forests to CC and to guarantee the functioning of ecosystem services. The application of specific silvicultural treatments is aimed: at ensuring the productive function of forests by verifying the impacts on biodiversity of different approaches (ManFor CBD - LIFE09 ENV/IT/000078); at ensuring structural diversification and the increase of microhabitats in Mediterranean beech forests (Fagus - LIFE11

NAT/IT/000135 and Carabus - LIFE11 NAT/IT/000213); at increasing the naturalness of artificial forests, improving their biodiversity and their capacity to mitigate CC (Selpibio - LIFE13 BIO/IT/000282).

Last but not least, it is very important **to include best practices in a territorial planning system**, both at local and scale. Planning is in fact the best tool for applying balanced and highly sustainable forest management.

LIFE Resilformed (LIFE11 ENV/IT/000215) for example, defined an evaluation system at forest stand level, based on 10 factors to be considered to improve the resilience of Mediterranean forests. AdaptFor (LIFE08 ENV/GR/000554) developed integrated approaches between analysis of forest vulnerability to CC, silvicultural treatment models and spatial planning tools. Finally, LIFE Boscos (LIFE07 ENV/E/000824) developed a forest management strategy in terms of adaptation to CC, and implements this strategy in a territorial planning system both on local and large scale.

For the application of efficient forest planning models, **new technologies** and **predictive models** play a very important role.

Both FRESh LIFE (LIFE14 ENV/IT/000414) and Comforest (LIFE12 ENV/ES/000148) tested smart planning models based on a wide use of remote sensing techniques. LIFE Hesoff (LIFE11 ENV/PL/000459) tested the use of new technologies for monitoring the forests health. Climforisk (LIFE09 ENV/FI/000571) and AForClimate (LIFE15 CCA/IT/000089) developed predictive models of forest growth and their vulnerability in relation to CC.

2. The European Network

The network activity at European level has highlighted important **knowledge gaps** regarding technical and legislative aspects in the field of forest management within N2000 Network. This jeopardizes the possibility to exercise the forest management which will be capable to preserve forests from degradation and to promote their adaptation processes to the CC.

3. The Italian National Network Table

The **need to improve the effectiveness of the programming tools of European structural funds** is emerging from this activity. This requires a more complete and in-depth definition of the objectives and of useful and necessary actions for a correct forest management, and at the same time, to better orient the financial instruments to the implementation of techniques, good practices and management models.

LESSONS AND RECOMMENDATIONS FOR THE GREEN DEAL IN RELATION TO FORESTS

Below are the most relevant lessons and recommendations emerged from the above analysis based on the LIFE GoProFor's experience. We believe that is very important that the EU encourage their implementation both at European level and in national policies.

➢ **Implement and make available tools to support adaptive forest management**

Many of the predictive models on the adaptation and potential growth of forests are based on the **accessibility and availability of both current and historical climate data**. It is therefore necessary to encourage efforts in this regard, since many tools to support decisions cannot be otherwise applied.

It is also extremely important to **define standard technical approaches to guide silvicultural choices** according to CC and biodiversity conservation. As concrete examples we cite the LIFE Resilformed forest resilience sheet, which estimates the short, medium and long term impact of a silvicultural intervention based on 10 parameters deemed decisive for forests resilience, and the Potential Biodiversity Index (IBP), already applied in several LIFE projects, which allows to determine how much a forest is potentially able to host biodiversity, based on 10 factors. The use of these **indicators as a practice** would allow to maintain or increase the resilience and biodiversity of forests, also in the field of productive silviculture.

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GOOD PRACTICES IMPLEMENTATION NETWORK FOR FOREST BIODIVERSITY CONSERVATION
IMPLEMENTARE IL NETWORK DELLE BUONE PRATICHE PER LA CONSERVAZIONE DELLA BIODIVERSITÀ FORESTALE

Finally, **forest management planning**, with the **use of new technologies**, and with the introduction of **climatic and biodiversity factors as the pillars for management choices**, is another priority element.

On a large scale, planning based on the use of satellite data, LiDAR and on information collected by drone, allows to draft plans at low costs, also including predictive assessments of species vulnerability to adaptation, fire risks, catastrophic events related to wind storms, and allowing to identify rewilding areas for the forest biodiversity conservation. In this way, the goal of adapting forests to CC and conserving their biodiversity can be achieved on a large scale, thanks to the planning and zoning of suitable forestry practices.

➢ **Encourage the implementation and sharing of adaptive forest management best practices**

An important key element is the **sharing and dissemination at European level of positive experiences and useful tools** already tested in this sector, through the creation of the best practices "community" and through the possibility of **specialized training** for those operating both in forestry and conservation world, also through online methods. It is also important to **ensure the application** of these experiences and tools, **by adapting the financing tools** of the European agroforestry system in the most appropriate way and by **improving the effectiveness**. This can be facilitated by proposing a list of techniques and forms of management, appropriated to the objectives of forest adaptation to the CC and that should be financially supported, and by improving the level of key performance indicators of the financing instruments.

➢ **Support a European monitoring network for the effects of CC on forests**

Forests have long times in responding to changes, including that of CC. For this reason, it is truly vital to have **long-term data collected through a standardized monitoring system at European level and available in a single database,** to evaluate their adaptations and changes over time.