

Poland Submission

1. Title / Heading:

Carbon Forest

2. Context and rationale:

The Carbon Forests project is the reply to the evolving negative climate changes. The main factor negatively influencing the climate is the excessive CO₂ emission to the atmosphere. In the Paris Agreement of the year 2015, forests were indicated as the natural absorbent of greenhouse gases, furthermore the Agreement stressed the wider use of forests and sustainable forest management to fight climate change. The project is especially meaningful in the context of last year's Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 24). This event was attended by ca. 20 thousand people from 190 states, i.a. politicians, representatives of non-governmental organisations, as well as science and business circles. At the Conference, the State Forests presented to the public the actions of Polish foresters aimed at climate change mitigation. At the COP 24 the Ministerial Declaration was adopted which calls for keeping and enlarging the carbon resources in absorbents and reserves of greenhouse gases up to 2050 and points at the key role of absorbents in reaching the goal set by the Paris Agreement.

3. An overview of the contribution:

The Carbon Forest Project is the proposal of the State Forests National Forest Holding to mitigate negative climate change. The main factor with negative impact on climate is the excessive emission of carbon dioxide (CO₂) and other greenhouse gases, e.g. nitrous oxide (N₂O). The project does not only promote forests as the ecosystem mitigating negative climate change, it also proves that the so-called additional actions in forestry on the project's areas significantly raise the absorptive potential of Polish forests. Temporarily, the Carbon Forest areas have insignificant impact on the CO₂ balance in Poland, as the project is of study character and is realised since 2017 on a limited area. It is a mainly scientific and research-based undertaking which is supposed to give a future answer to the question whether it is worth to be continued and what results it might bring if realised to a greater extent. The Carbon Forest Project is fully financed by the State Forests.

4. How the contribution leverages living natural systems as a solution to avert climate change:

The project is realised in 23 forest districts on the area of 13 regional directorates of the State Forests in chosen tree stands, altogether on an area of 12 thousand hectares. In comparison, the forest area in Poland accounts to 9,3 million hectares, out of which 7,6 million hectares are managed by the State Forests. The extent of the assessed effect of additional CO₂ absorption in the Carbon Forest Project is around 1 million tons in the period of 30 years, these calculations are done with the help of the software Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3). It means that in the years 2017-2046 on the aforementioned forest area included in the project, almost 1 million tons more of CO₂ will be absorbed due to the realised additional actions (exemplary actions among these are: introducing the 2nd storey of trees and shrubs, afforestation, introduction of fast growing species, enlarging areas of natural regenerations and actions preventing damages of the soil surface). In accordance with the accepted model, extension of the time period by further 20 years will cause the rise of additionally absorbed CO₂ by 1,9 million tons. If the

abovementioned assumptions were confirmed during the project's realisation and the forest area on which the additional actions achieved the expected results was 1 million hectares (out of 7,6 million hectares managed by the State Forests), the quantity of additionally absorbed CO₂ would account to 83,3 million tons in the period of 30 years. The Carbon Forest Project is being supported by various research centres in Poland: the Forest Research Institute, the Poznań University of Life Sciences, Institute of Dendrology in Kórnik, Bureau for Forest Management and Geodesy, Taxus I.T. and the University of Agriculture in Kraków. Expert and research support is ensured by international institutions - via the Forest Research Institute – as the Joint Research Centre. For the benefit of the project further research and development studies realised in frames of the program Rembiofor are used (financed i.a. by the National Centre for Research and Development in the scope of BIOSTRATEG programs), as the project BIOSTRATEG1/267755/4/NCBR/2015, that is Teledetective determination of wooden biomass and carbon resources in forests.

What is more, in last October the first auction of additionally absorbed carbon dioxide took place, that means carbon dioxide units absorbed due to the realisation of additional actions. The results of the auction were announced at the International Fair of Environmental Protection POL-ECO SYSTEM in Poznań. The entire income gained from the sale of carbon dioxide units is to be allocated in the realisation of the following undertakings of educational, recreational and environmental character: construction of a wooden observation tower, conservation of a historic frontier pole, construction of recreational sites, purchasing grounds for afforestation and modernisation of educational trails. These undertakings were chosen by the purchaser of the carbon dioxide units.