

Sustainable land use

13 CLIMATE
ACTION



- **Wetlands restoration**
- **Climate smart agriculture**
- **Reforestation**

Sustainable land use with **no time to waste**

Agriculture, forestry, and other changes in land use account for almost 20% of global greenhouse gas emissions. Growing populations raise food demand leading to unsustainable farming, destruction of nature, and deforestation. Since 1990, global deforestation has had a rate equivalent to 800 football fields per hour. Natural solutions, sustainable land use and restoration of nature are an inevitable part of the cure to prevent, mitigate or adapt to climate change.

cBrain has developed a range of solutions for governments aiming to make an impact fast. The results have shown that when solutions are easy for landowners to access and designed to reduce administrative burdens, we can rapidly achieve our land use goals and achieve results above and beyond expectations.



Climate lowlands

- Denmark aims to reduce nationwide GHG by 15% with solution developed in 3 months

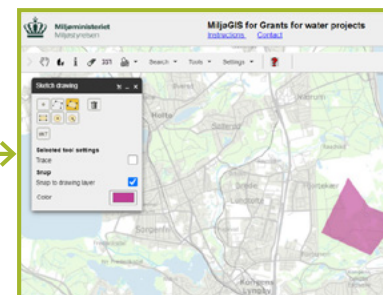
Restoring wetlands is one of the most apt solutions across the planet for sequestering, rather than emitting, greenhouse gases from land use. In November 2020, the Danish Environmental Protection Agency (EPA) was approved to subsidize landowners to cease intensive use of carbon-rich lowlands. Within three months, cBrain delivered a fully digital end-to-end solution that enables landowners and municipalities to easily apply for funding to restore agriculture lands to wetlands, and the EPA to seamlessly administer the grants; including automatic quantification and prioritization of each project for maximum impact and direct fund disbursement.

“We have worked diligently with a simple subsidy-scheme, where we listened to municipalities and land-owners who wanted fast conversion of land-use, a simple set-up with one application and one-time compensation, and with the possibility of serving several purposes at once. At the same time, we were able to implement fast on our new IT-platform and deliver an effective and user-friendly solution to our applicants”.

The Danish EPA

Prior programs were undersubscribed with few landowners showing interest. In contrast, for this solution applications exceeded the budget by 3 to 1. Within the year, the government increased funding due to overwhelming land user demand and concluded that year one had led to more than 2.000 hectares of restored nature and reduced GHG emissions of 35.000 tons.

Landowner applies for grant



Integration with GIS / business-intelligence tools

Automated business case calculation

The Sustainable Land Initiative

Climate resilience and sustainability for farmers in California

Agriculture is the fifth largest source of California's greenhouse gas emissions. The Sustainable Land Initiative (SLI) will help farmers plan, fund and execute plans to reduce their carbon footprint and enhance water protection without being held back by years of "green tape".

California has the most volatile weather in the United States. Farmers must contend with severe floods, droughts, and forest fires sometimes within the same year.

The digital solution empowers Resource Conservation Districts joining The Sustainable Land Initiative to assist landowners in rapidly and consistently identifying agriculture practices that will help achieve their sustainable goals.

These practices are then aligned with funding and implementation support, which drive rapid adoption of sustainable practices while enabling state, local and private entities to achieve their environmental objectives, such as:

- Greenhouse gas reduction / sequestration
- Water conservation
- Biodiversity
- Land and riparian restoration
- Forest fire reduction

The fully digital solution allows disparate government agencies with funding programs to access an inventory of local, shovel-ready environmental projects and to accurately measure and account for the environmental impact of individual projects and in aggregate.



Accelerated and accountable reforestation in Denmark

The Danish Climate Forest Foundation will help achieve Denmark's ambitious climate goals through the establishment of forests and the changed use of carbon-rich lowland areas from intensive farming to forestry. These lands will go from causing significant emissions to sequestering CO₂. The foundation has been created by the Danish government and is to combine public and private funding for new forest and maintain a carbon registry, where contributing private stakeholders and the government can off-set their emissions. Urgency required the platform to be deployed fast and with strong accountability measures, such as GIS-data, to ensure full compliance with international carbon credit standards.

With the digital platform, the Danish Climate Forest Foundation can receive applications, score them based on the price pr. sequestered unit, and by giving points for synergy-effects on nature, safeguarding drinking water reserves, etc. The Foundation has developed a calculation method for CO₂-effects, which is documented on every application case. There are also systematic checks to ensure that projects funded are truly additional to justify carbon credits.

The price-scoring and the synergy-points are used to prioritize between applications. To this end, the foundation extracts a list of applications with cases in ascending order based on price and points for final prioritization and approval and communication to the applicants. The project was concluded in less than 12 weeks, including design, configuration, implementation and training.

Applied Climate Software for Governments

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<p>F2</p>	<p>Energy Efficiency</p>	 <p>Home Energy Audit Denmark</p>	 <p>Energy Efficiency in Companies Egypt</p>	 <p>Inflation Cash Assistance Denmark</p>	 <p>Heat Pump Grant Denmark</p>
<p>Sustainable Land Use</p>	 <p>Climate Lowlands Denmark</p>	 <p>Sustainable Land Initiative USA</p>	 <p>Climate Forest Grants Denmark</p>	<p>Protection of Biodiversity</p>	 <p>Licensing of Trade Endangered Species (CITES) Denmark & Guyana</p>
 <p>EU Natura 2000 Protected Areas Denmark</p>	 <p>Urban Roof-top Gardening Denmark</p>	 <p>Wildlife Regulation Denmark</p>	<p>Circular Economy and Waste</p>	 <p>Extended Producer Responsibility Kenya</p>	 <p>International Waste Export and Import Denmark</p>
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 <p>Access Benefit Sharing Nagoya-convention Denmark</p>	<p>Clean water and air</p>	 <p>Drinking Water Protection Denmark</p>	 <p>Waste Water Control Denmark</p>	 <p>Home Woodstove Removal Denmark</p>	