ZERO CARBON FUND

A simple yet world changing idea

Saving the planet by building for
our next generation

BLOC

Laudes Foundation

ZERO CARBON FUND

ZeroCarbonFund is a business case for the implementation of large-scale application of timber in the building industry through the setup of a transnational timber chain. It aims to facilitate a transition to a zero carbon economy in the Netherlands and eventually stir momentum towards a conscious choice of building materials in Europe and across the globe. The fund will be implemented through a wide selection of projects in the Netherlands to set the wheel of wooden revolution in motion.

Large-scale application of timber for construction

Transforming the ecosystem of building industry

Solution to climate crisis & housing crisis:

Housing supply of 1M by 2030 and UN target to cut CO2 emissions

Several projects in Netherlands:

Catalogue of projects to be financed with with the aid of the fund

Collaboration: funders, builders, foresters & enablers

Forming a timber cooperation

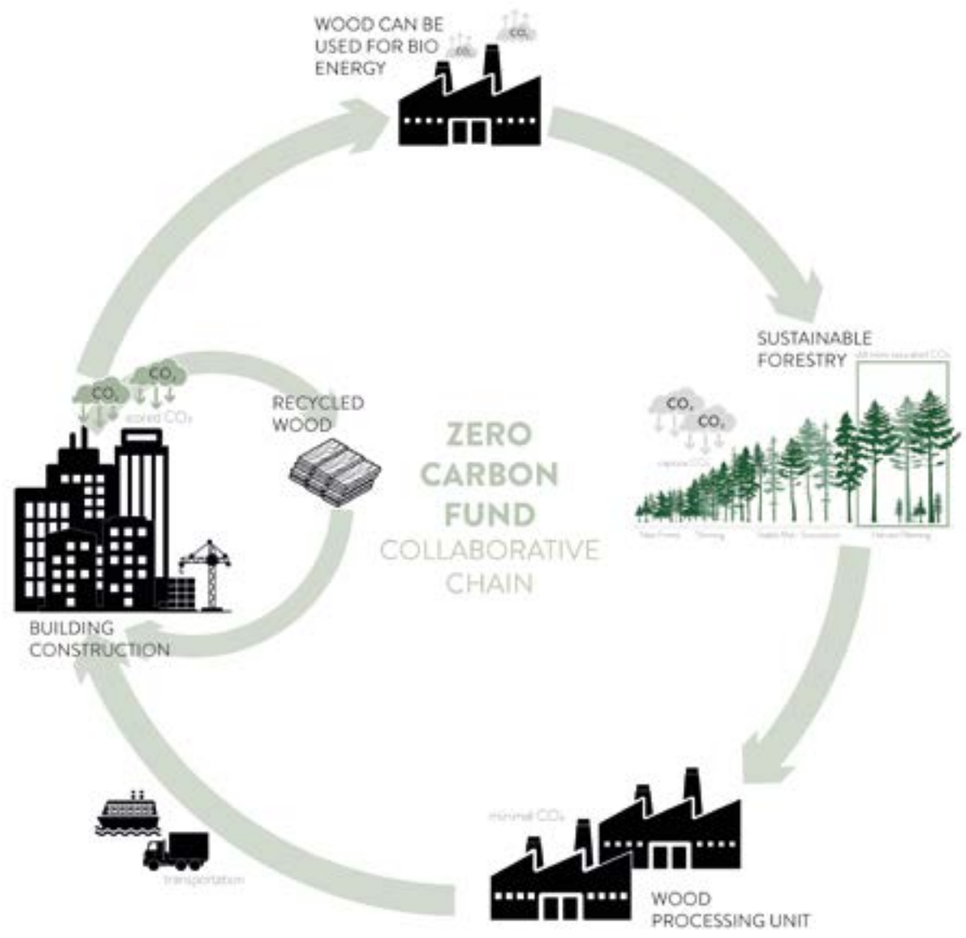
Promoting sustainable forestry

Ensuring timber to increase forest cover and biodiversity

Decarbonising building industry

Transition to a carbon negative economy

ZeroCarbonFund is a collaborative impact-driven financial tool that covers the entire chain from forestry to timber construction to recycle of timber. It (1) combines public and private funding to reduce CO2 emissions by (2) accelerating and increasing the use of wood in construction and (3) ensuring the planting of new forests.



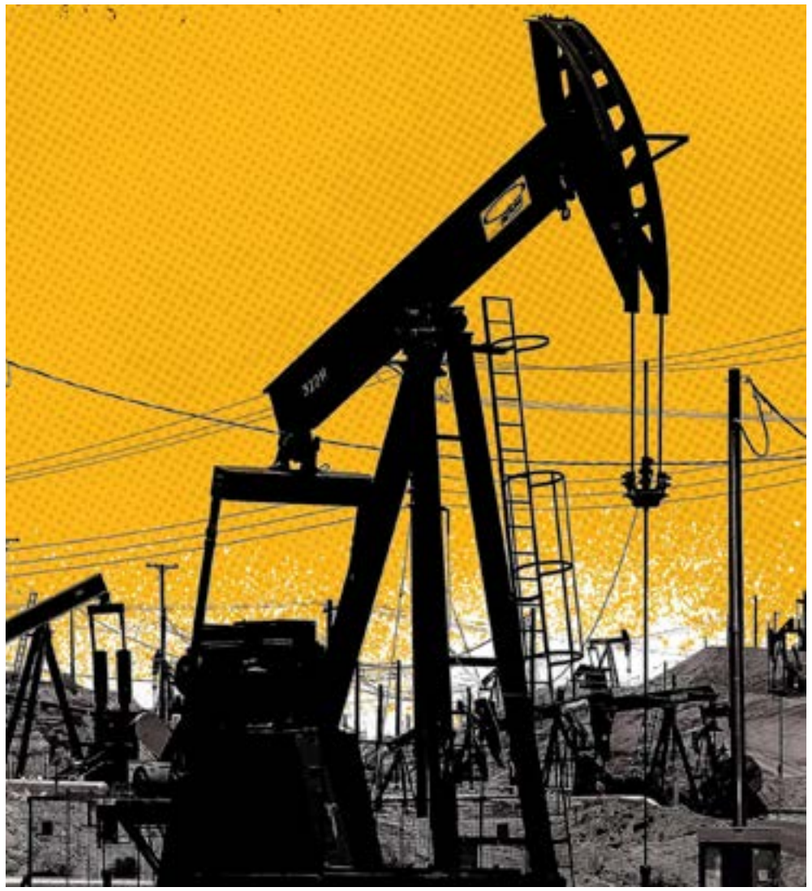
ZeroCarbonFund collaborative chain

“Emissions from buildings will double by 2050. Decarbonizing the global building stock is therefore crucial to meet climate goals and secure a safer future.”

Housing Crisis + Climate Crisis

In the next decade, one million homes need to be built in the Netherlands to meet the rising demand. At the same time, the building industry is one of the largest emitters of greenhouse gases, and therefore, an industry that needs change. With the need to attain the 1.5 degrees target set by the UN, large amounts of carbon must be sequestered along with mitigating the emissions. Combine these challenges and we see an opportunity. Let's introduce wood and other biobased materials when realising the housing challenge and avoid megatons of CO2 emissions!

Focus on Embodied Energy



Until recently the focus on environmental impact in the construction industry has solely been on operational energy. However, embodied energy is at least as important! Embodied energy (EE) is the total energy consumed by a building material during all the processes associated with the construction of a building until its disposal. Traditional materials like concrete and steel use a lot of EE in comparison to timber and other biobased materials. That's why ZeroCarbonFund stimulates a material transition to lower the environmental impact of construction.

Finance as Leverage

Traditional building materials (concrete and steel) have higher market due to its profitability and cheaper financial cost, while their social or environmental damage is way higher! Financial mechanisms are necessary: excise duties on energy-consuming and grants for eco-friendly materials. ZeroCarbonFund would play a key role in facilitating this shift towards a green economy and creates a new business case for wood, by establishing a fund with which companies can offset their currently unavoidable CO2 emissions into long-lived storage by investing in timber constructions.

“Buildings are responsible for nearly one-third of global energy-related greenhouse gas emissions, making them the single biggest global emitter by sector.”

“By 2030, the Netherlands aims to reduce its greenhouse gas emissions by 49% compared to 1990 levels.”

“The timber would lock up 45 megatons of carbon dioxide, but the total benefit would be 100 megatons, since building out of concrete and steel would lead to emissions of 55 megatons.”

HOW WOULD ZCF WORK ?

COMBINING PUBLIC AND PRIVATE FUNDING

ZeroCarbonFund is a collection point for different money streams. Firstly, for public national and regional funds from governments that invest in the public interest behind the fund: reducing CO2 emissions. Secondly, for benefactors, charity organisations and impact organisations that want to co-invest from the same public interest. And thirdly, to organisations (for example from the technology or construction sector) that want to offset their CO2 emissions by investing in the ZeroCarbonFund.

ACCELERATING AND INCREASING THE USE OF WOOD IN CONSTRUCTION

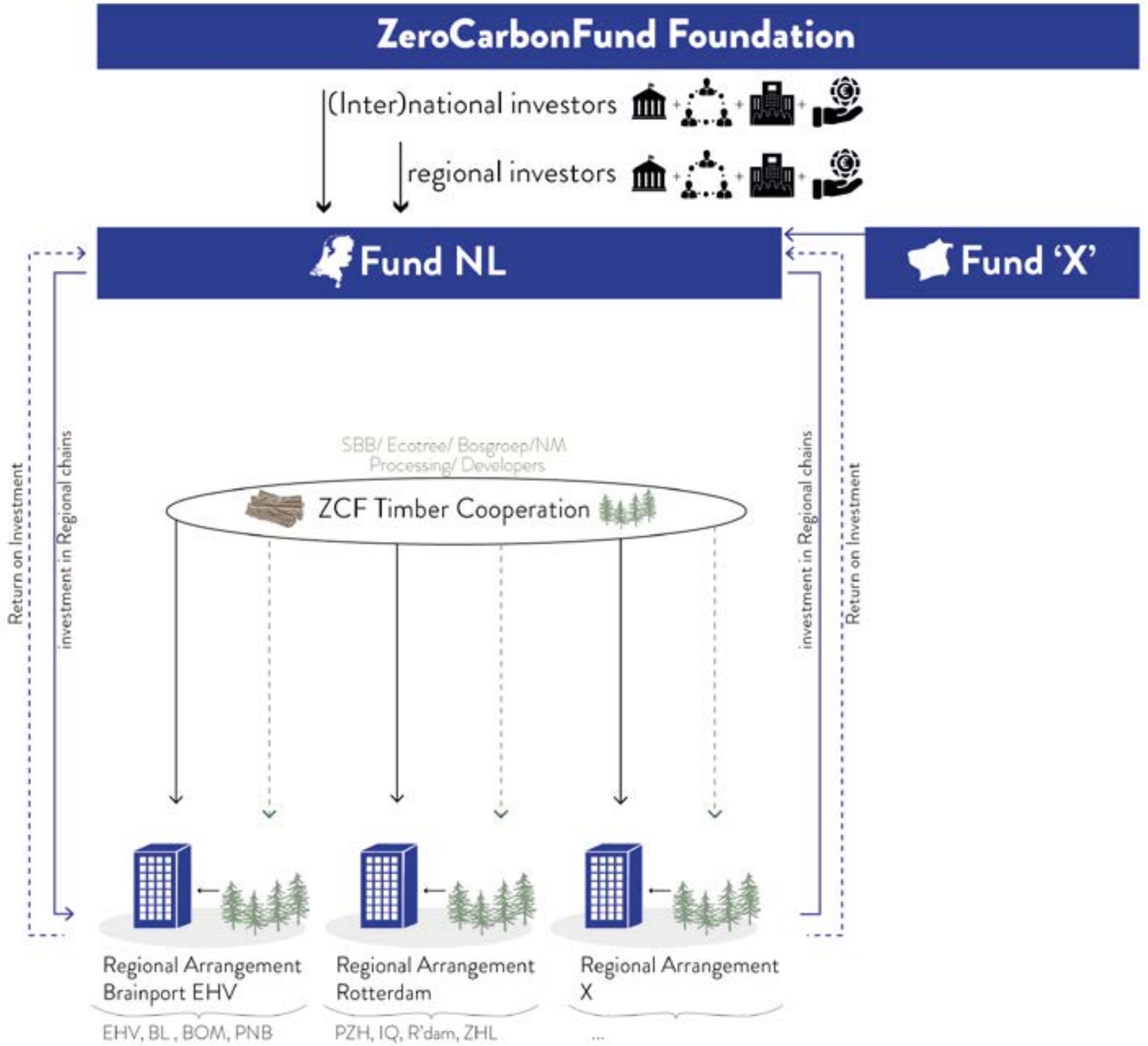
Part of the resources from the ZeroCarbonFund are used for the development of wood construction projects. The resources are intended for the purchase of the right types of wood and their delivery to one or more projects. This is done by the ZeroCarbonFund Timber Cooperation with the resources from the ZeroCarbonFund Foundation. Out of every euro invested, part goes to the development of timber construction projects and part to planting new forests.

LIFE SPAN GUARANTEE

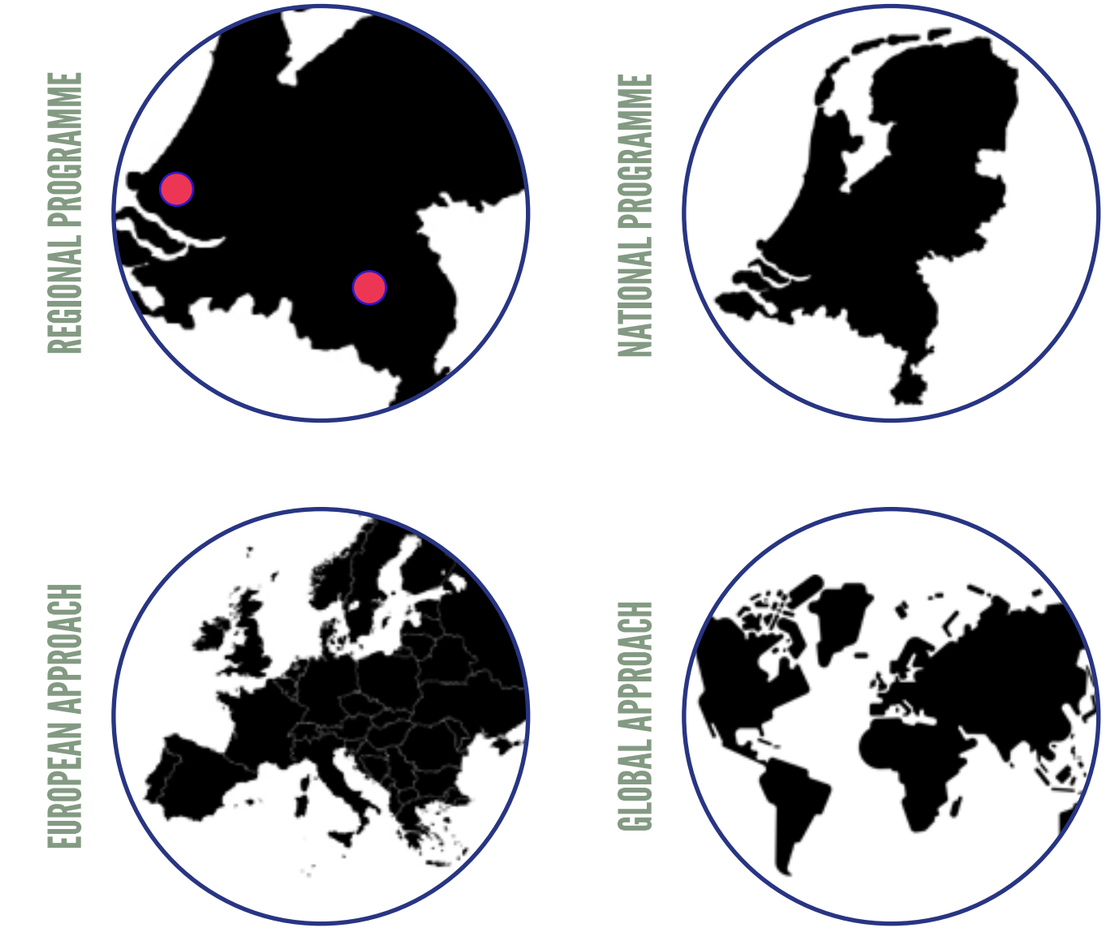
The Timber Cooperation is not only a supplier of the timber but also retains ownership of the timber that becomes part of the construction project. The cooperative thus provides the wood as a service to the developer or investor. In this way, the cooperation can ensure that the wood - and the CO2 embodied in the wood - has an optimal life span. After any dismantling of the building, the timber cooperation will ensure a new application of the wood, thus extending its life span indefinitely.

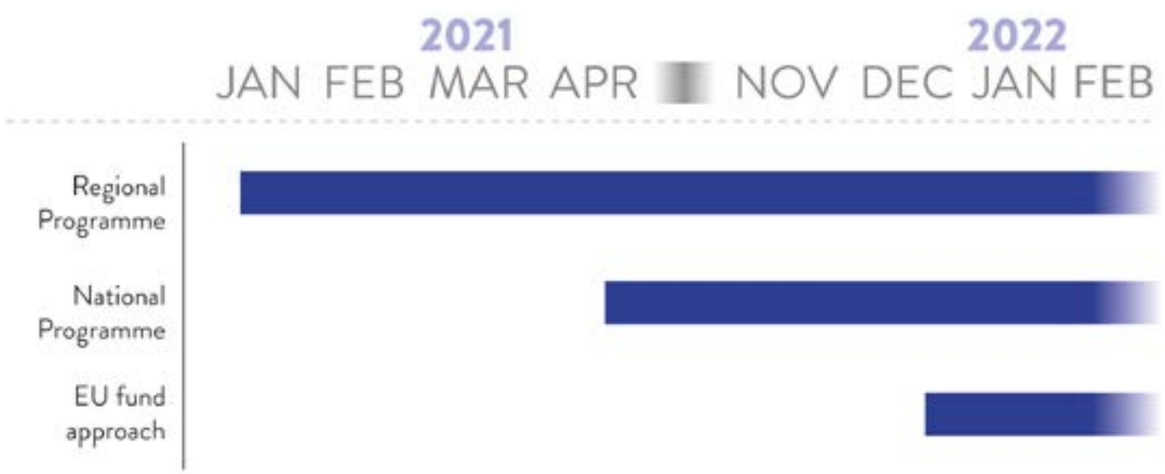
REVOLVING FUND

ZeroCarbonFund is a revolving fund. The funds raised by governments, charities and companies from national fund managers are invested in timber construction and forestry projects. The investment involved in supplying the timber for timber construction projects will be returned to the ZeroCarbonFund in 300 monthly instalments, increased by a predetermined interest rate. In this way, a self-sustaining system is created that has an increasing impact on the use of wood in construction and forestry.



OUTLOOK





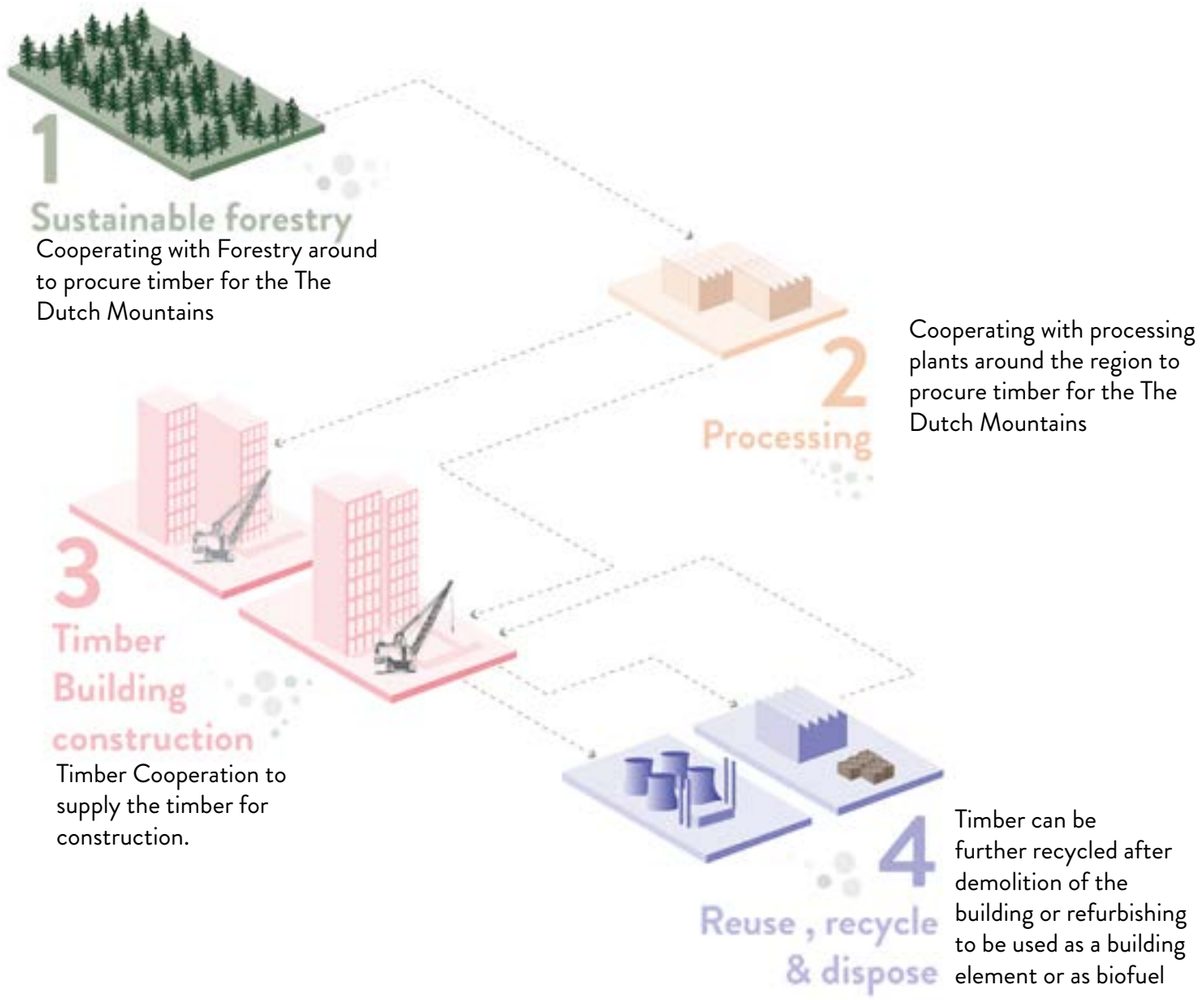
Scale of Impact

ZeroCarbonFund would impact the construction ecosystem at four levels. The first level is the regional level. At this level, specific financiers (governments and businesses) are linked to specific projects and a regional chain is organised between forestry and timber developers. The second level is the national level. An organisation will be set up that takes care of the implementation of ZeroCarbonFund in terms of fund management. In addition, a Timber Cooperation will be set up per country. Work is also being done at the national level on supporting regulations and a system of certification. The last two levels are the international and European levels. In the first years, the focus will be on European countries. The aim of ZeroCarbonFund is to achieve a transnational approach that accelerates the use of wood in construction and the planting of new forests.

Timeline

The regional programme includes the Brainport pilot and Zuid Holland pilot that will kick off by January 2021. Thereafter at the Innovation Festival in April 2021 the national programme would commence. This programme includes setting up of Timber Cooperation (with organisations such as Staatsbosbeheer and Ecotree) and fund management (with Nationaal Groenfonds and Bank Nederlandse Gemeenten), along with a regulatory system and certifications that would be launched to accelerate the use of timber in construction and to increase the forest cover across the whole of Netherlands. The scaling up and transferability of this fund beyond Netherlands would begin by the end of 2021/ beginning of 2022 to start the European fund approach.

REGIONAL PILOT



LAUNCHING PLATFORM: BRAINPORT EINDHOVEN, THE NETHERLANDS

The first pilot in The Netherlands will commence in the **Brainport Eindhoven region**. This region made famous by iconic technological powerhouse such as Philips, ASML and NXP, is the perfect ecosystem to start such a next generation movement. Here our first pilot project will be launched: The Dutch Mountains, a large mixed-use building with two towers, mainly constructed in wood.

Three main challenges that we are tackling to organize and kick off the regional pilot project:

1. Setting up a regional chain. How do we create a regional chain for the different pilot projects between the parties involved? To realize the Dutch Mountains pilot, we are already in talks with, the Municipality of Eindhoven, the Brabant Development Company, the Province of Noord-Brabant and Brabants Landschap for the supply of wood and the planting of forests. The challenge is to concretize the collaboration and close the regional cycle and to develop similar chains in for pilot projects in other regions.

2. Calculation of the embodied carbon of construction materials. The questions we are delving into are how do we create a system in which Embodied Energy is included in the positive effects of wood construction and the CO2 balance? When are we allowed to take the embodied energy into account?

3. Developing a system of CO2 compensation. How do we make the compensation system in emissions transparent, measurable and useful? We are exploring and assessing methodologies to organize the monetization of Carbon or facilitate carbon accounting effectively.

THE DUTCH MOUNTAINS- PILOT PROJECT

The pilot project for the ZeroCarbonFund, The Dutch Mountains, will be realised in the city of Eindhoven in the Netherlands, and will be the largest wooden building in the world.

The Dutch Mountains is an architectural icon in timber, a powerful ensemble with a sculptural main shape consisting of two towers, which are fluidly connected. The building will become the symbol of healthy and sustainable urbanization and sets an example that can inspire and encourage other projects to build with timber.

The building will mostly consist of biobased materials, by realizing the building largely in solid wood, originating from sustainably managed forests. This stores a large amount of CO2 for a longer period ánd it prevents CO2-emissions by using less concrete and steel.

"Wood where possible, concrete where necessary" is the motto. Concrete will be used for the most heavily loaded structural parts of the building, and the finishing of floors due to acoustics. The application of timber is especially visible in the substructure where floors, columns, ceilings and the roof construction are made of wood. The CO2 reduction achieved by using wood where possible is no less than approx. 8,600 tons compared to a reference design in solely concrete. The choice of a partially wooden support structure leads to a whopping 70% reduction in CO2 emissions!

WOODEN MILESTONES


The Dutch Mountains,Eindhoven

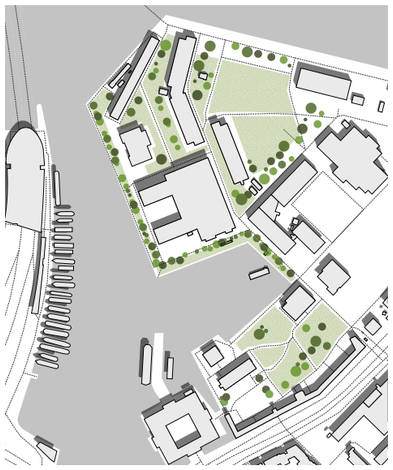

Sawa, Rotterdam

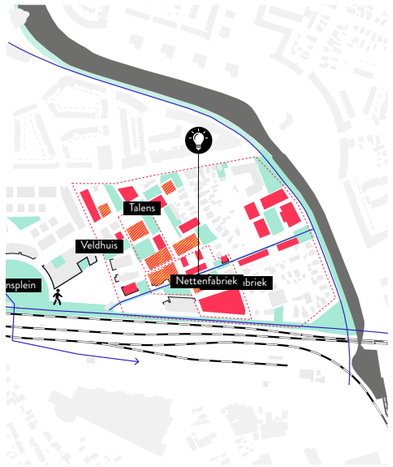

Elements , Amsterdam


Tree House, Rotterdam


Haut, Amsterdam


Patch 22, Amsterdam


Marineterrein, Amsterdam



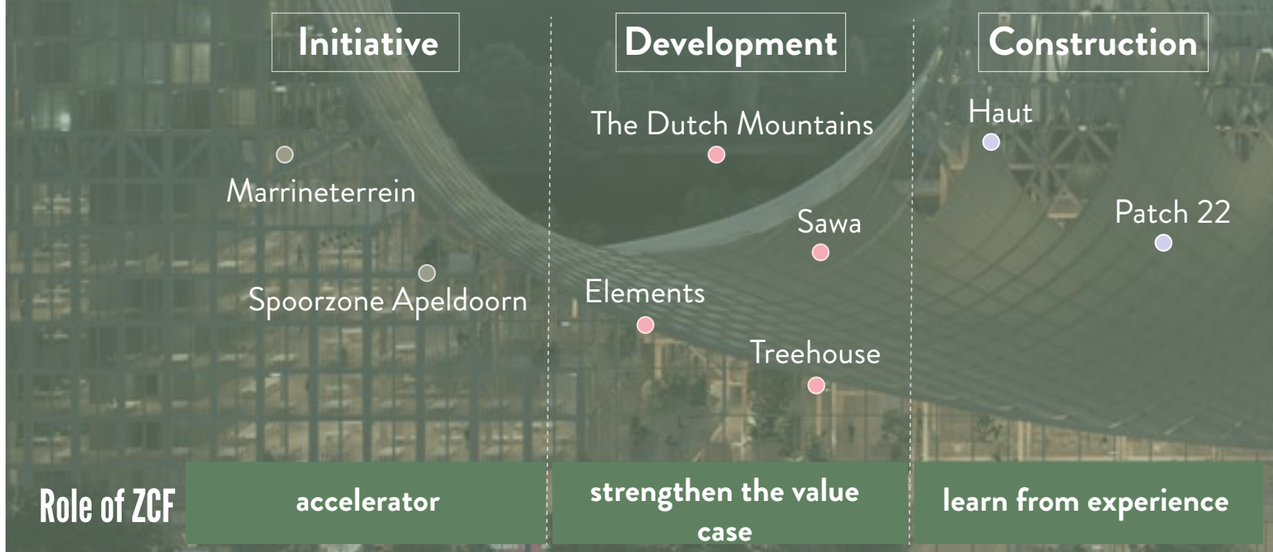
Spoorzone Apeldoorn

Alongside the Brainport pilot, a projects funnel will be developed with an overview of timber projects that can be launched in the Netherlands with the help of the ZeroCarbonFund foundation. The funnel would scale up the momentum and energy to shift the ecosystem towards timber & biobased construction. We distinguish different kinds of projects based on the scale and phase of development.

Construction: Timber projects currently under construction like Patch 22, Haut in Amsterdam could possibly become knowledge partners from which ZCF can learn from their experiences and explore solutions for the challenges faced.

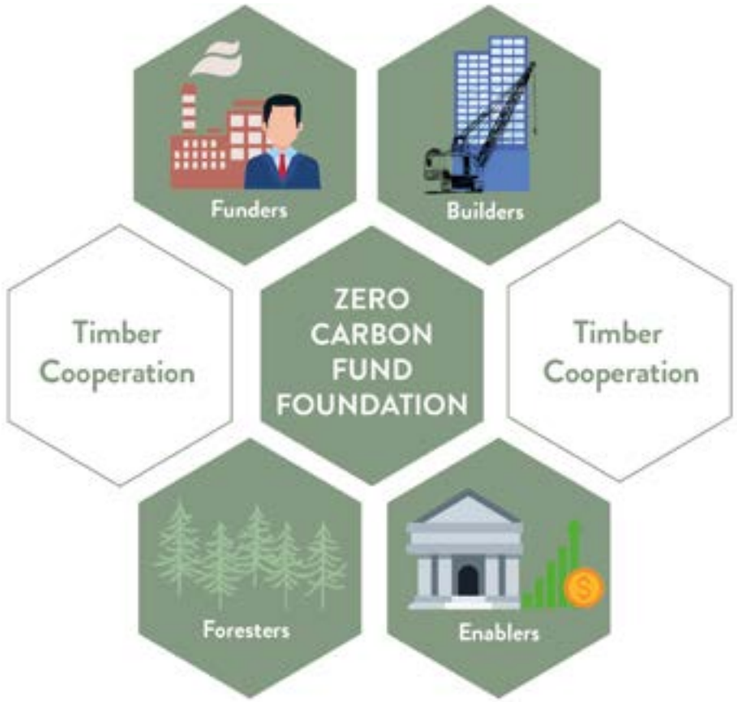
Development: Future urban landscape in the Netherlands will see an increase in timber buildings with upcoming projects such as Elements, a new 70-metre-tall hybrid residential building in Amsterdam; Sawa, the first wooden building in Rotterdam; Tree House, a project by Provast in Rotterdam and others which could possibly become a part of the ZeroCarbonFund cooperation and network. ZCF could contribute in strengthening the value case for these projects.

Initiative: Area development projects like Spoorzone Apeldoorn & Marineterrein are exploring timber solutions and joining the timber revolution. This would entail a large-scale impact and accelerate the transition by opening up discussion for other such large-scale urban development projects in timber.



LET'S JOIN FORCES!

Climate change is happening, and it is happening fast. We need to act now!
ZeroCarbonFund is a start for fighting carbon emissions in the building industry. One thing we know is that we can only make this happen when we work together. This crisis knows no boundaries of nations, departments or sectors. We need to find mechanisms to work together towards a common goal, sharing our knowledge and experiences.



We need you! As visualized in the illustration above, we are searching for:
1. Funders: banks and companies that want to invest or compensate for their CO2-emissions in societal relevant projects.
2. Builders: initiators and developers of construction projects in timber that are to be realised in the coming 5 years.
3. Foresters: landowners and/or managers that want to be a supplier of wood for timber projects and can grow and manage sustainable forests.
4. Enablers: organisations such as governments, institutions & knowledge partners who want to make this initiative a reality in a short term. We are currently assessing methodologies for carbon accounting and certification for impact-investment and therefore looking for certification experts who can help us out with that.

TOGETHER, WE START A ZERO CARBON MOVEMENT.

Join us in this quest to enable the large-scale application of timber in the building industry to contribute to a better world.

Register here
Visit our site: ZeroCarbonFund
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BLOC develops bold and inspiring solutions for the next generation of our cities in a rapid, agile and iterative way. Buildings, environments, mobility: clever, clean and cutting-edge. Right here, right now.

Laudes Foundation

Laudes Foundation is a new, independent foundation that joins the movement to accelerate a transition to a just and regenerative economy. Combining a philanthropic purpose with the scale and reach of industry, they work persistently and collaboratively to: 1) influence capital, working through the global financial system to redirect the flow of capital so that investment encourages good business practices; and 2) transform industries, tackling the most pressing and systemic issues of fashion and the built environment.