




ZERO CARBON FUND

Let's go timber fast!



**“ AN ACCELERATED
APPLICATION OF TIMBER IN
OUR CITIES BY MONETIZING
THE CLIMATE EFFECT ”**

WHY TIMBER ?

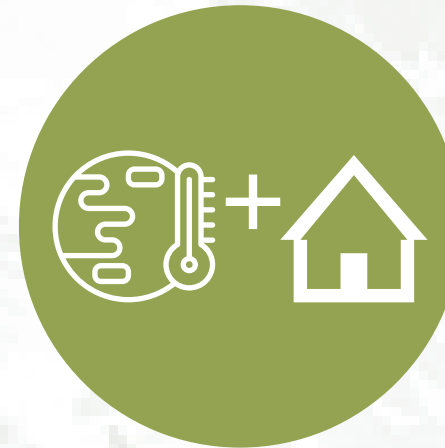
Transition in building industry

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 COP21, 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!

Timber for construction has multiple benefits over the traditional materials in the building sector. Apart from the climatic benefits, timber has functional, aesthetic and construction benefit as well. It also contributes in generating more green jobs within the region. Timber is the plausible solution contributing to guage the crises at hand.



Decarbonises building industry - Reduction and storage of CO₂



Responds to Housing + Climate crisis



Construction benefits- built faster, lower transportation and labour costs



Aesthetic and functional benefits of wood



Promotes forest cover



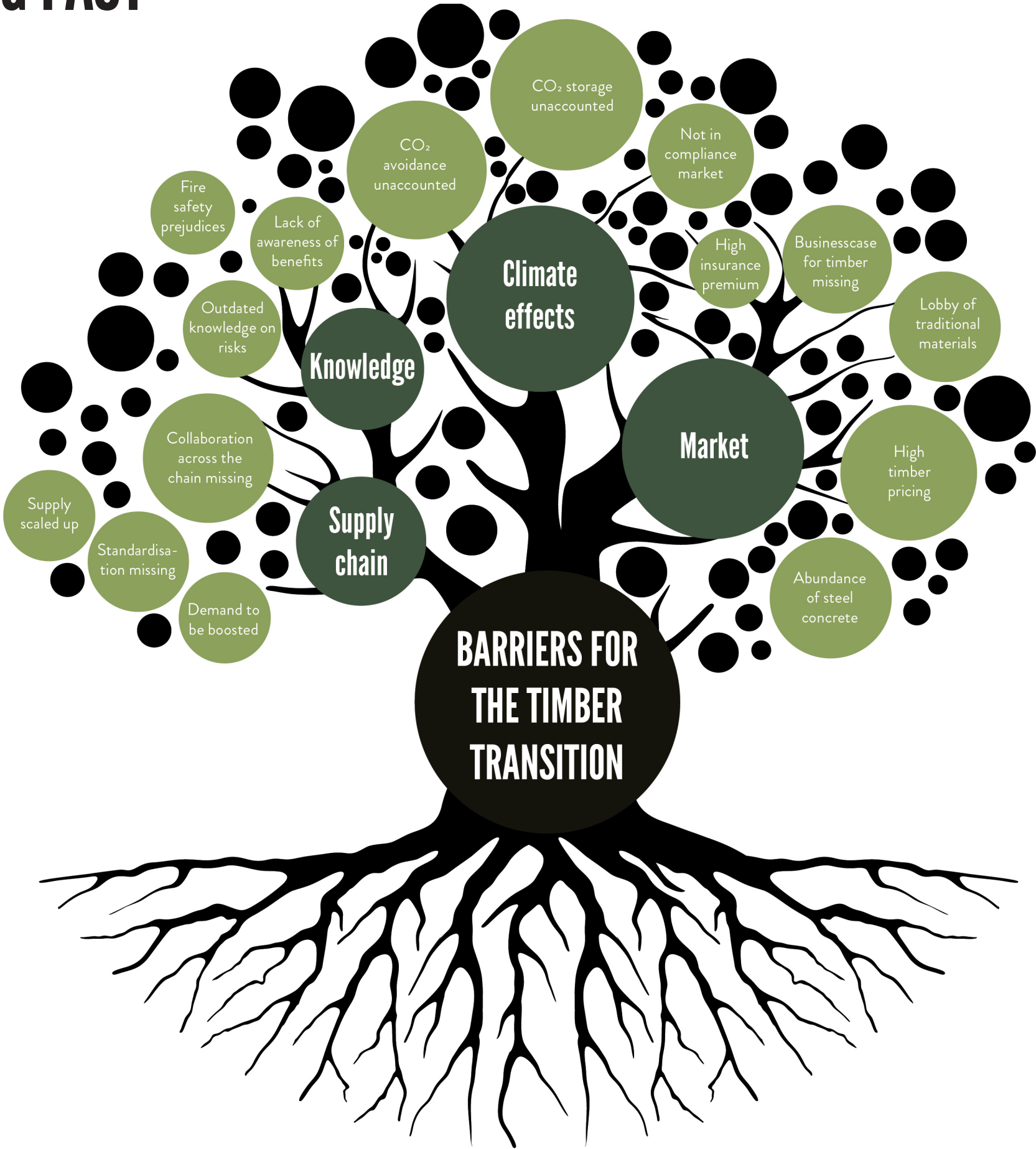
Increases sustainable green jobs

WHY IS THIS NOT HAPPENING FAST ENOUGH ?

TOGETHER TOWARDS TIMBER TRANSITION

Wood is gradually being viewed as the solution that could make a significant impact and contribute towards achieving the goal of Paris Agreement. It brings the focus onto embodied energy in materials that we consume which can potentially avoid large tonnes of CO₂. Currently a wide range of momentum and thrust exists in the building sector through multiple initiatives to push forward the large-scale application of this net zero building material. However, the scale and speed of this impact needs further acceleration. This impetus to achieve a widespread timber transition could be achieved by overcoming the barriers in the **Market, Supply chain, Knowledge, and Climate effects**.

The mind map crystallises few aspects from these four categories that requires attention. We need to work together to develop projects, practices, cooperation, processes, mechanisms, funding logics, organizational forms and platforms that can help us come closer to our goal and tackle the challenges confronting us.





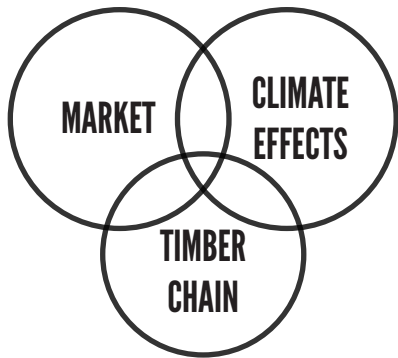
**LET'S MONETIZE CLIMATE EFFECTS
NOW TO SPEED THINGS UP**

THAT'S WHY ZERO CARBON FUND IS HERE!

What we do is simple: we manage a system to trade the carbon rights that are being generated by building in wood. Our portfolio of carbon-low or even carbon-negative buildings provides us with a supply of these rights. This enables our parties to compensate for currently unavoidable carbon emissions.

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.



It 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.



HOW DOES IT WORK?

COMBINING PUBLIC AND PRIVATE FUNDING

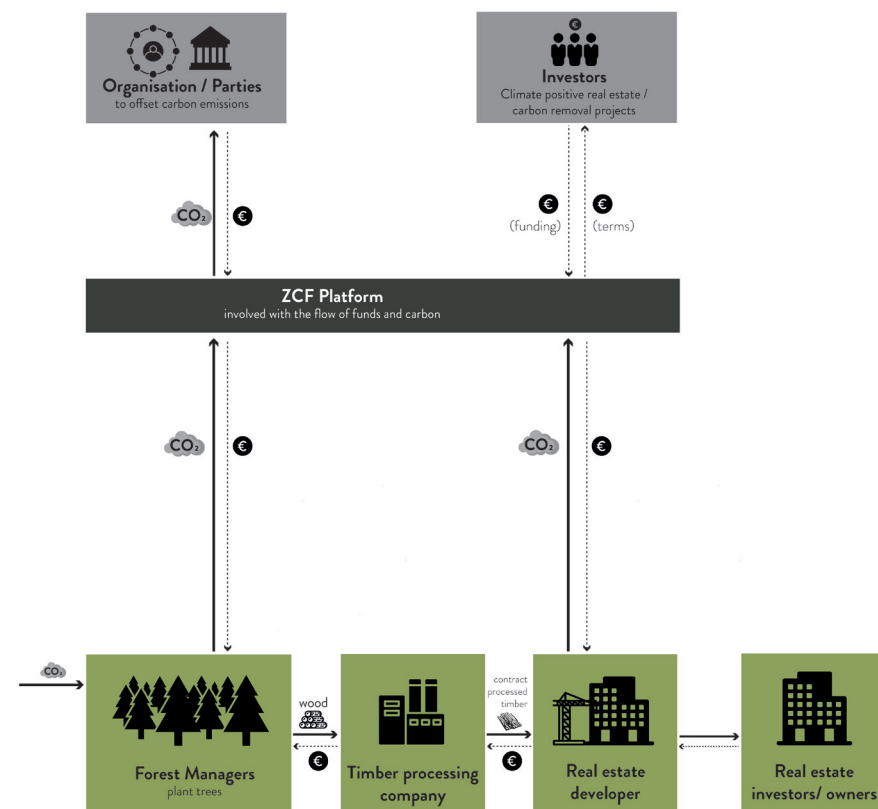
ZeroCarbonFund is a collection point for different money streams. Firstly, for public national and regional funds from governments that invest in the public interest behind the fund: reducing CO₂ emissions. Secondly, for benefactors, charity organisations and impact organisations that want to co-invest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

climate positive real estate or carbon removal projects.

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 to enable the purchase of right types of wood and their delivery to one or more projects. The resources from the ZeroCarbonFund Platform are expended in two models that acknowledge the open market system. Out of every euro invested, part goes to

Sales Model for ZeroCarbonFund

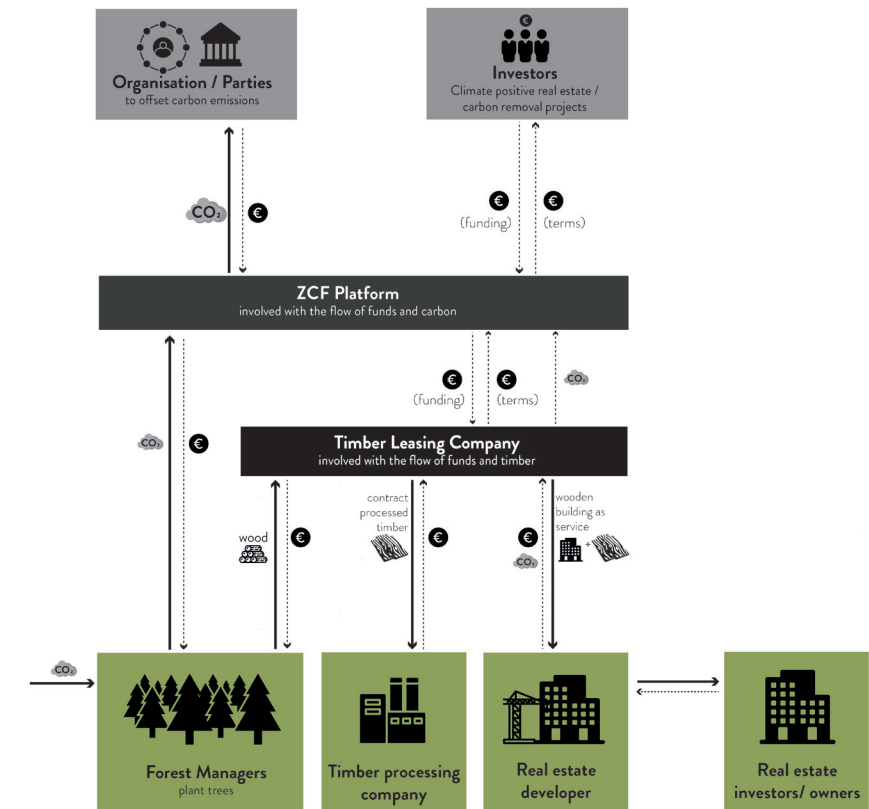


the development of timber construction projects and part to planting new forests. Leasing model facilitates supply of timber that becomes part of the construction project. This model thus provides the wood as a service to the developer or investor. In this way, the leasing company can ensure that the wood - and the CO₂ embodied in the wood - has an optimal life span. After any dismantling of the building, the leasing company 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 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.

Lease Model for ZeroCarbonFund



REGIONAL PILOTS

The Netherlands is the perfect location to combine the demand for proper housing (with a shortage of one million homes) – with a solution for the climate crisis (the Netherlands is one of Europe's largest emitters of CO₂ per capita). The regional pilot involves the cooperation between Noord-Brabant and Zuid-Holland that would initiate a step towards timber transition. Within the regional pilots, we distinguish two tracks that reinforce each other and together form the entire chain – from forestry to timber construction, funded by carbon compensation.

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. We would collaborate with companies from the Brainport and the beyond to invest. 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. FINDING A METHOD TO CALCULATE 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 TRADING CARBON CREDITS.

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 in the voluntary carbon market.



THE DUTCH MOUNTAINS

The first 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 one of the largest hybrid wooden buildings 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.

“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!



OUTLOOK

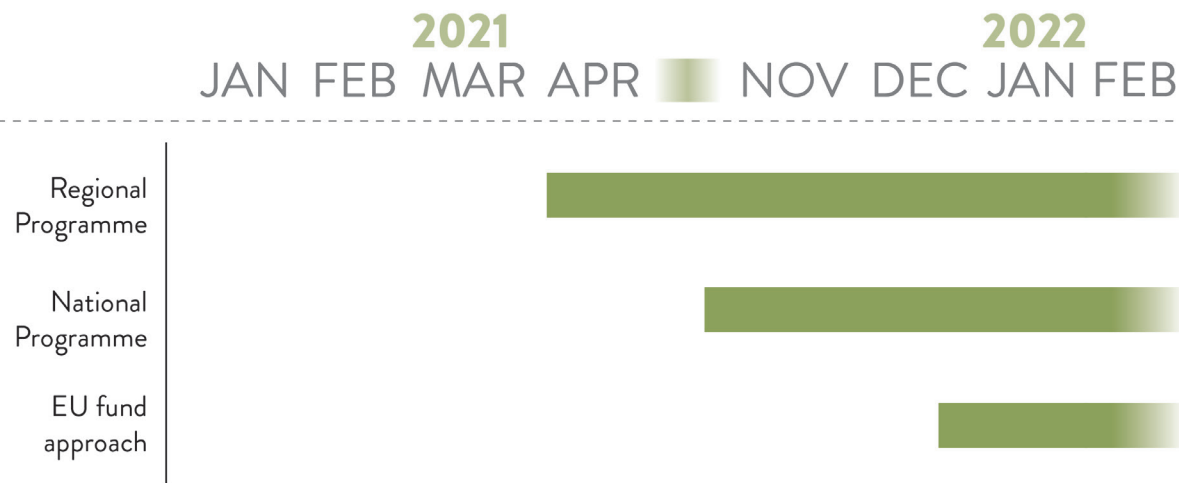
Scale and Timeline

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 collaboration of Noord Brabant and Zuid Holland pilot that will kick off by April 2021. Thereafter at the Innovation Festival also 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 carbon accounting system including 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.



WOODEN MILESTONES

Area development or building projects



The Dutch Mountains, Eindhoven



SAWA, Rotterdam



Tree house, Rotterdam



Patch 22, Amsterdam



Elements, Amsterdam



HAUT, Amsterdam

Alongside the regional 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 platform. 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:

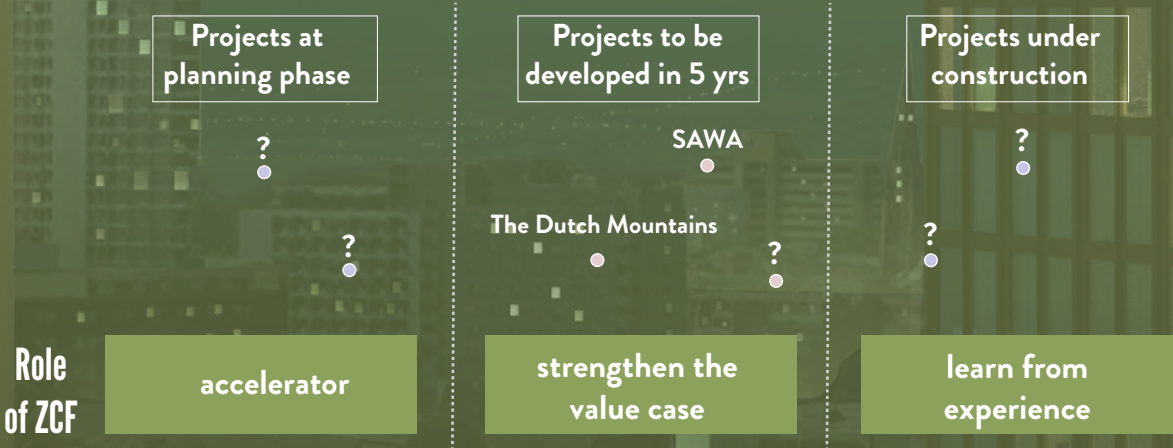
Timber projects currently under construction like Patch 22, Haut in Amsterdam could possibly become knowledge partners from which ZCF can learn from their experiences and explore solutions for the challenges faced.

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 Pro-vast 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.



HOW WILL THIS WORK AS AN ORGANISATION?

One thing we know for sure is that we can only make this happen when we do this together because 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 to join forces to develop projects, practices, cooperation, processes, mechanisms, funding logics, organizational forms and platforms that can enable the timber transition and significantly contribute in achieving net zero carbon economy. We attempt to bring together important stakeholders necessary to be connected in the chain to plan and take our steps in the future. We need enablers, foresters, builders, funders and initiators who can work together to facilitate the transition.

Collaboration with Foresters, Builders, Funders, Enablers and Initiators



LET'S JOIN FORCES

Climate change is happening, and it is happening fast. We need to act now!

ZeroCarbonFund is a start for reducing 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. Let us collaborate and cooperate to achieve our shared vision and transform into a greener and healthier planet.



We need you!

1. Funders:

companies that want to 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, banks and investors 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 organisations who can help us out.

5. Initiators:

People or organisations who want to set up their own, similar initiative. We can help you with our research and network.

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.



Acknowledgement

We would like to thank the below ecosystem of parties for their time, energy and ideas in this project.



We would also like to thank the almost 30 parties that we spoke to during the entire process and looking forward to our collaborations on the upcoming work.



[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.