

TBP01x - 6.0b - Interview Haven Rotterdam

Hi, this is Patricia Osseweijer of the University of Delft in the Netherlands, and here we are in the city of Rotterdam. I am here talking with Monique de Moel, who is from Business Development in the Port of Rotterdam. Can you tell us something about the Port of Rotterdam?

Of course Patricia. You are here in the Port of Rotterdam, which started in its original form about forty kilometers off the sea coast and now grew into a port which is on sea. Our last reclamation was actually in the sea. We have about 1200 industrial acres of land in the port; with an annual throughput of four million tons, we are Europe's largest port.

Wow that's really fantastic. There is a lot of business in the port, I assume. Is there also anything related to biobased?

Yes, actually we drafted for the Port of Rotterdam a Port Vision 2030, which is a sort of insight in the port's future: growing into a healthier, greener and cleaner port. We drew up the port vision with knowledge institutes like yours, but also with governments and industries.

What is the vision of the port, do you want to become more biobased?

Yes, one of the important elements of the Port Vision 2030 is the transition to a biobased industry. For us that means coming from an industry solely working with fossil fuel, to more an economy where also biobased is added to resources.

That's interesting. Is there already some business here related to biobased technology?

Yes, actually you can say that the bioport is already in place. We have two world scale production sites; one for bioethanol, and one for biodiesel – well actually NExBTL, which is a high-grade biodiesel. Next to that, we have the production of PET here in the Port of Rotterdam, which is used to produce the green bottle of Coca Cola. And a large amount of agricultural and vegetable oils come into the port to be processed for food and feed applications.

So that's already quite a bit. So what about the future, are there plans to be more biobased than you already are?

Yes, as I told you before we try to make a transition to the biased economy. We think the Port of Rotterdam is very suitable for the biobased economy because the handling of production, but also the trading in and market to the biased products is here in the port. Two main factors are characterizing for the port. That is one: the industrial symbiosis, where companies that come into the port and have a location where they can use utilities that are located in the port. We call that 'shared utilities'- industrial gases, steam, wastewater

treatment. Those are already in place, so companies can make advantage of that and benefit from that, so they don't have to have dedicated utilities for themselves. This is going to probably reduce the investment costs by a high amount. Next to that, we have great logistics here. We have dedicated freight trains, inland vessels, connections with our neighbouring countries but also with other regional clusters like in North Rhine- Westphalia or in Belgium, so pipelines going there. It is great to have your production in Rotterdam.

So these companies are working together and sharing their rest streams of their processes with other companies? Is that the idea behind it?

Yes, that is the integrated chain that we are aiming for. That's between companies in the biobased economy themselves, but also if you have a valorised or optimized process of your biomass and you can make biochemicals, biofuels or bioenergy, then you also can tap into the existing industry that is already here- the petrochemical industry, and the fuel industry. So you can actually benefit from drop-in chemicals or blend your biofuels into the fuel pool that is already existing in Rotterdam. So the business to business market is there!

Rotterdam is one of the world's leading industrial clusters. Here, a versatile and sustainable bioport is emerging. A bioport, which offers ample space for the generation of bioenergy, production of biochemicals, and production of biofuels. Many well-known companies have already made substantial investments. Producing and handling in Rotterdam means taking full advantage of economies of scale, synergy and world-class logistics. No other European port can boast the same high integration of activities. In Rotterdam bioport, companies benefit from a fully-fledged biomass chain. In the integrated chemical cluster, biochemicals play an increasingly prominent role, making optimum use of clustering, integration and co-siting, energy efficiency, innovations, and R&D. By sharing logistics and utilities, business cases for upcoming biochemical processes can be further improved. A completely new biobased industrial cluster will arise on Maasvlakte 2, the new port area on the North Sea. A solid base for greenfields development, situated directly on deep water. Production plants can optimally benefit from already existing biobased activities in the immediate vicinity as well. The port authority is developing shared logistics and utilities to further increase efficiency. Bioport: combining bioenergy, biofuels, and biochemicals with existing and new businesses. The more we share, the greater our value. Change your perspective.

That's interesting! I also heard that you have a new area of the port; can you say something about that?

Yes, on Maasvlakte 2, which is our reclaimed land as I told you, we develop a new industrial area which is especially for biobased industry. We have a sort of plug and play concept

there, where the shared utilities but also the integrated chain approach that you just mentioned is key to development there.

It really sounds very interesting. Can you say something about how you deal with sustainability in that sense; do you have a vision for that as well?

Of course. We underline that biomass should be sustainable and conflicts with food or feed crops should be avoided. Of course biomass must comply with regulatory laws and certificates on sustainability. For us, it is important- because we are an international port, we prefer the laws or certification on a European or international level.

Well Monique, thank you very much for sharing all this information with us. If students like to have more information, then I am sure we will give them the website where all the statistics can be downloaded, and where you can find more information about the Port of Rotterdam. Monique, thank you very much!