

## APPLICATION FORM - Submission Details

**Submission Date : 10/03/2019 3:06 pm**

<b>Unique Submission ID</b>	170
<b>Terms and Conditions acceptance</b>	Yes
<b>First Name</b>	Eric
<b>Middle Name</b>	
<b>Last Name</b>	Klarenbeek
<b>Artistic Name</b>	Klarenbeek & Dros with atelier Luma, Luma Arles
<b>Team Members</b>	5
<b>Nationality</b>	NL
<b>Gender</b>	Male
<b>Date of Birth</b>	
<b>Mobile Number</b>	
<b>Country</b>	Netherlands
<b>State / Province</b>	
<b>Town / City</b>	Zaandam (Amsterdam)
<b>Street Address 1</b>	
<b>Street Address 2</b>	
<b>Postcode / Zip</b>	
<b>University (just for students)</b>	
<b>Document</b>	
<b>Document Number</b>	

<b>Prize Category</b>	Conscious Innovation Projects
<b>Project Title</b>	Algae Lab by Klarenbeek & Dros with atelier Luma, Luma Arles
<b>Source of the used material</b>	Local Algae
<b>Type of plastic involved</b>	None - Compostable / Biodegradable biopolymers
<b>Other materials involved</b>	Fermented and processed sugar
<b>Years of production</b>	ongoing
<b>Edition</b>	Prototype
<b>Weight and Dimensions</b>	
<b>Manufactured by</b>	Locally / Decentralised on 3D printers, at Luma and at 3D printhubs, in both South of France, countries around the Mediterranean (such as maroc, egypt, turkey etc), and in the Netherlands
<b>Describe your project accurately and how you developed your idea</b>	<p>Eric Klarenbeek and Maartje Dros develop local grown algae based biopolymers. Their aim is to set up local cultivation hubs for biopolymers, absorb CO2 through production, and meanwhile replace synthetic and fossil oil based plastics. The duo has set up the Algae Lab at atelier LUMA in Arles (FR) at which they have formed an expertteam of scientists, designers and biologists. This besides a consortium and local network of institutes and companies in the field of biotechnology and polymerisation. At the Algae Lab the team researches and cultivates local algae from the region and its surrounding wetlands, Rhône delta the Camargue. The focus of the research is on algae species, that contain or develop, or when grown under specific conditions, ingredients for biopolymers. These polysaccharides, complex sugars and starches can function as a binder or have other properties, such as algae based pigments, as shown in the various utensils. A series of local cultivated micro-organisms is processed in the lab, converted and compounded into a biopolymer. Both the material and colors compete with traditional plastics and synthetic colors. Although the developed materials can be applied on an industrial scale and processed like traditional plastics, and is proven suitable and currently effectively used for injection molding, the designers main focus goes out to introduce a fully local and closed production cycle. From raw material to end product. This by optimizing the material for 3D printers, designing 3D printable products and setting up networks of local (sea)farmers, producers and makers with the aim to set up and stimulate social structures for local production. Their goals are clear; strengthen, make use and re-value local ecology, resources, social structures and economy and reduce,</p>

eliminate and even absorb emission from production and transport.

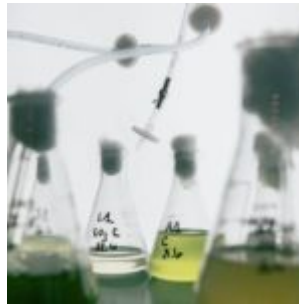
**Picture 1 - Cover**



**Picture 2 - Designer Portrait**



**Picture 3**



**Picture 4**



**Picture 5**



**Picture 6**



**Picture 7**



**Picture 9**



**Picture 10**



**URL**

<https://www.youtube.com/watch?v=t9sNeReXkSg>

**URL**

**URL**

**URL**

**Email**

**Modified Date**