



Governo dos Açores



INNOVATION
sustainable islands' growth
INNOVATION
croissance durable des îles



AlgaePARC Bonaire

Rene Wijffels
Professor Bioprocess Engineering
Wageningen University,
The Netherlands

Edison Rijna
Island Governor
Bonaire
Dutch Caribbean

OVERSEAS COUNTRIES
AND TERRITORIES
INNOVATION
PAYS ET TERRITOIRES
D'OUTRE-MER



Objectives AlgaePARC Bonaire



- Develop new economic activities (diversification)
- Roadmap for sustainable production of algal products for food, feed, chemicals and fuels
- Develop human capital and infrastructure
- To attract companies investing in production technology

Based on the use of local resources

- Development of a stand-alone algae production facility
 - Use of sunlight, seawater, CO₂, and nutrients
 - To produce aquafeed, food, chemicals, biokerosine



AlgaePARC Bonaire



AlgaePARC Bonaire and aquafeed

- Imagine

- 4000 ha salinas
- 100 ton algae/ha/year
- 400,000 tons of algae/year
- 25% of global need for fishmeal for salmon



- Economic benefit

- Make use of local resources
- Diversification of the economy
- Education
- Create jobs
- Stimulate investments

AlgaePARC Bonaire and biofuels

- Imagine
 - 4000 ha salt pans
 - 100 tonnes algae/ha/year
 - 33 tonnes biofuel/ha/year: 132.000 tonnes/year
 - Dream: 50 tonnes biofuels/ha/year: 200.000 tonnes/jaar
 - TUI uses 200.000 tonnes kerosene per year
 - 2136 return flights to Bonaire
- Sustainable
 - Respect nature
 - Involve tourism
 - Involve environmental organizations
 - Model for other islands



AlgaePARC Bonaire project plan

- Feasibility (OCTA phase)
 - Techno-economic analysis
 - Business cases
 - Design of pilot plant facility
- Critical mass for research (e.g. NWO)
 - Isolation of local algae species
 - Development of sustainable production process
 - Development of infrastructure
- Demonstration phase
 - Business cases
 - Investments

