



How to create the Biofuture?

*Articulating the means to accelerate sustainable
bioenergy deployment*

Utrecht Biomass Sustainability Workshop

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The Biofuture Platform



**Argentina • Brazil • Canada • China • Denmark • Egypt • Finland • France
India • Indonesia • Italy • Morocco • Mozambique • Netherlands • Paraguay
Philippines • Sweden • United Kingdom • United States • Uruguay**

“Creating the Biofuture” Report: What’s Inside

1. The role of the sustainable low carbon bioeconomy in a 2 degree world
2. Data and information on production and consumption of biofuels and bioproducts;
3. State of play of advanced biorefineries
4. Survey and diagnosis of barriers to growth
5. Survey and analysis of current national policies
6. Lessons: Push policies and pull policies are both necessary as part of a comprehensive enabling framework



Across Biofuture Platform and Mission Innovation IC#4 countries, a common sense of importance to role of the low carbon bioeconomy

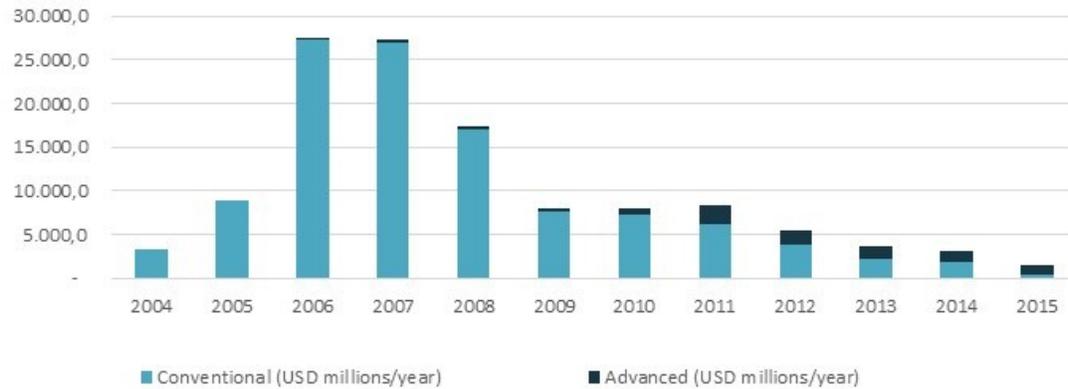
Region / Country	Importance rate of the bioeconomy	
	biofuel	bioproducts
Asia		
China	Very important	Very important
India	Little importance	Little importance
Indonesia	Very important	Very important
Philippines	Very important	Little importance
North America		
Canada	Little importance	Little importance
USA	Little importance	Little importance
World total		
Latin America		
Argentina	Very important	Unknown or unanswered
Brazil	Very important	Little importance
Mexico	Little importance	Little importance
Paraguay	Little importance	Little importance
Uruguay	Very important	Very important

Region / Country	Importance rate of the bioeconomy	
	biofuel	bioproducts
Europe		
Denmark	Little importance	Very important
EU	Little importance	Unknown or unanswered
Finland	Very important	Very important
France	Little importance	Little importance
Italy	Little importance	Little importance
Netherlands	Very important	Very important
Norway	Very important	Very important
Sweden	Very important	Very important
UK	Little importance	Little importance
Africa		
Egypt	Unknown or unanswered	Unknown or unanswered
Morocco	Unknown or unanswered	Unknown or unanswered
Mozambique	Little importance	Little importance

KEY:	
<i>Unknown or unanswered</i>	Unknown or unanswered
<i>Irrelevant</i>	Irrelevant
<i>Little importance</i>	Little importance
<i>Important</i>	Important
<i>Very important</i>	Very important

Source: original questionnaire to Biofuture and MI IC#4 policy-makers

After a 2006-08 boom, investments in biofuels have struggled...



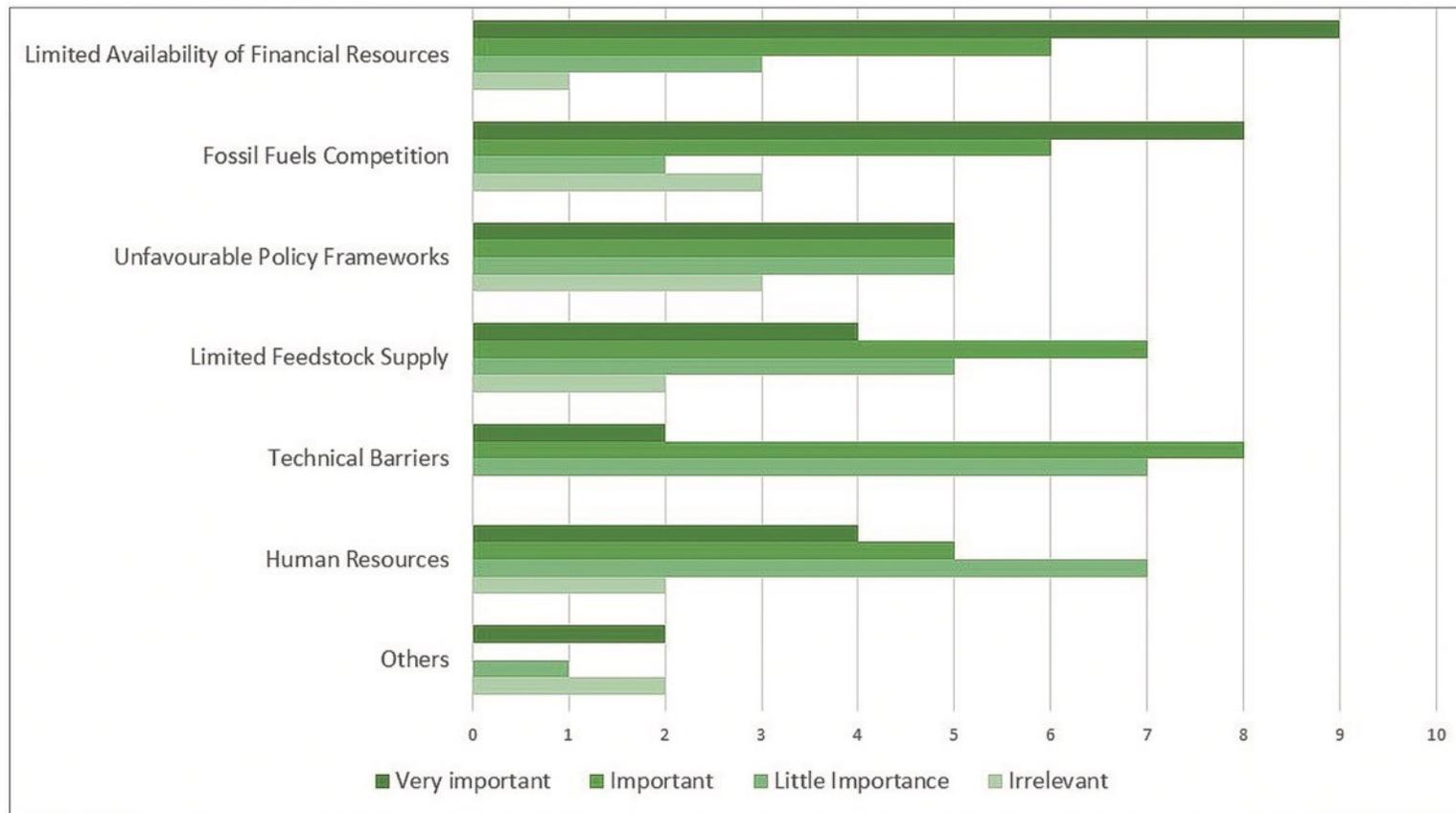
Source: (IRENA, 2016b). Notes: IRENA analysis based on Bloomberg New Energy Finance (2015), Global Trends in Clean Energy Investment.

... but are again starting to pick up

- ▶ Higher oil prices
- ▶ New and/or reinforced policies (Brazil, China, EU, India, USA)
- ▶ Slowly maturing technology for commercial plants

Advanced biorefineries are growing fast, but immature technology makes actual production significantly lower than installed capacity

Lack of finance, competitiveness, unfavorable policy frameworks, and limited feedstock supply are four main barriers to faster bioeconomy growth



Key lesson: a complete policy package needed to enable sustainable bioeconomy scaleup

- ▶ **Lesson 1:** the sustainable low carbon bioeconomy has to be policy driven at this stage to overcome barriers to growth and reach competitive scale
- ▶ **Lesson 2:** A complete policy package is recommended to create an enabling environment; isolated measures are probably not enough. This could include:
 - ▶ technology and innovation support (technology push);
 - ▶ market demand support and incentives (market pull)
 - ▶ ties to sustainability measures and carbon lifecycle assessments;
 - ▶ strong financial instruments designed to enable the development of the bioeconomy, leveraging green finance.

What's next? A collective effort of international initiatives to provide common goods to countries

Policy debate, country ownership, advanced bioeconomy



Sustainability, capacity building, cooperation



Agricultural and biomass practices



Scientific and Technical collaboration



1. Policy guidance and
2. Platform can help articulate
3. A working sustainability approach
4. Reinforced technical and technological cooperation



Energy analysis, knowledge



Renewable energy deployment, development cooperation



Research and innovation promotion, collaboration



Private sector link



Finance, green bonds

WHAT COULD BE THIS COMMON GOOD COMPOSED OF?

1. Policy guidance and convergence
2. Appropriate financing mechanisms
3. A working sustainability approach and governance
4. Technical and technological cooperation

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