

# Biobased economy – new opportunities in education

Gerlinde van Vilsteren, 26 september 2016



# Global challenges

Food security



Climate change



Food and Nutrition



Bio-based Economy



## Driving forces Bio-based society – Economic growth

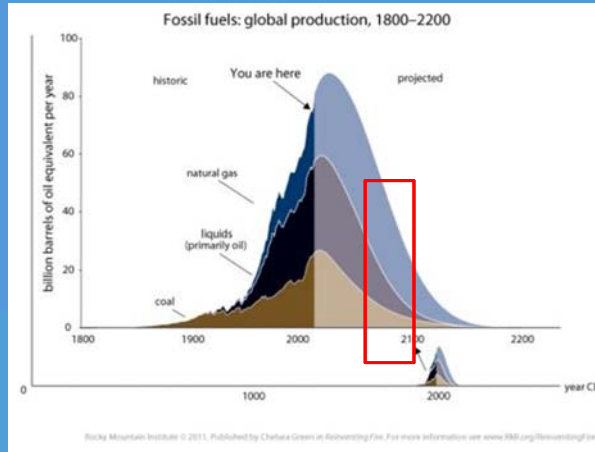
- (Regional) economic growth and employment
- New chances for farmers



## And it is not totally new....

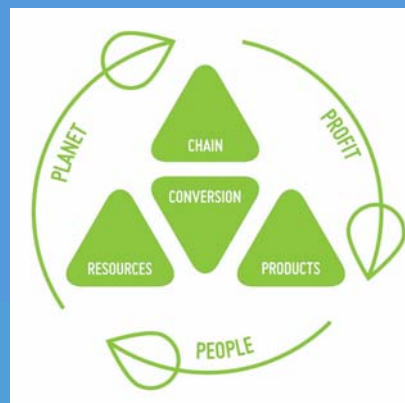


## The fossil based economy was a hiccup in history



Our students are the ones who will realize this transition to a bio-based society

## Multi-factor, transdisciplinary approach - People, planet, profit



## People - Will a bio-based product be bought?



Dutch report: "Doen en laten: effectiever milieubeleid door mensenkennis" – *acting and not acting*

Raad voor leef-omgeving in infrastructuur (RLI)

## Centre for Bio-based Economy



The Centre for Bio-Based Economy (CBBE) is a Dutch collaboration between educational institutes and industry to educate professionals for a strong bio-based Economy.

- Knowledge transfer and innovation in education
- Applied research
- Joint projects with industry



The CBBE includes Wageningen University & Research | Aeres Hogeschool | HAS Hogeschool | Inholland | Van Hall Larenstein | Hogeschool van Arnhem en Nijmegen | Avans Hogeschool | HZ

## Dutch cooperation



## Survey under secondary school students, 2011 (n=4000) - Executed by Newcom, Amsterdam

- 7% is familiar with the term bio-based economy
- 70% is not familiar with the term bio-based economy
- When explained: 70% became enthusiastic
- 40% were interested to follow a program related to bio-based



## Continuous learning for the Bio-based Economy

### Starting at primary school up to life long learning

- Modules and laboratory experiments
- [CBBE-wiki](#)
- BSc-courses, BSc-minors, MSc-specialisation, PhD-courses
- Courses and training for Life Long Learning

### But also for teachers and a wide audience

- MOOCs
- Training and courses for the teachers
- Website with open access educational material, coordinated by WU ([www.biobasedacademy.nl](http://www.biobasedacademy.nl))



## Learning objectives BBE-education

- Disciplinary expertise will stay the starting point
- Another mindset is required - a holistic approach
  - Look broader than own sector
  - Think in value chains and cycles
  - Ability to work in multidisciplinary teams
- Transition to a bio-based society will take time

## BBE-education – innovative in 2 ways

- Content is multidisciplinary and cross-sectoral
- Digital methods, blended learning, flipping the class room and on-line
- => two-steps at once

## Master and Micromaster Biobased Sciences for Sustainability

- New on-campus MSc-programme is being developed
- Micro-master will start in january 2017





**MICROMASTERS PROGRAM**

WageningenX  
Biobased Sciences for Sustainability

Learn how to help engineer a biobased future from the top experts in the field at the #1...

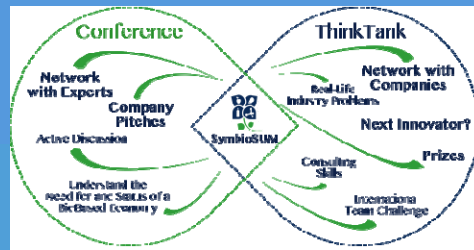
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## IBBESS



- Organized by students of Wageningen University
- Sun 28 August 2016 until Wed 31 August 2016 in Wageningen
- 60 students from 20 countries and 13 universities



## ELLS – Euro League for Life Sciences

ELLS-conference ELLS 2016 - Scientific Student Conference and ELLS Annual Conference

"Bio-Based Economy for a Sustainable Future"

10 - 12 November 2016

[link](#)





## European network

- Open EU-wide network
  - Within education
  - Within education, companies, research, (N)GO's
- Exchange of inspiration, ideas, knowledge and educational material
- Exchange of students and staff
- Student competition
- Summer schools

We're looking for educational partners. Please join us!

## Thank you

