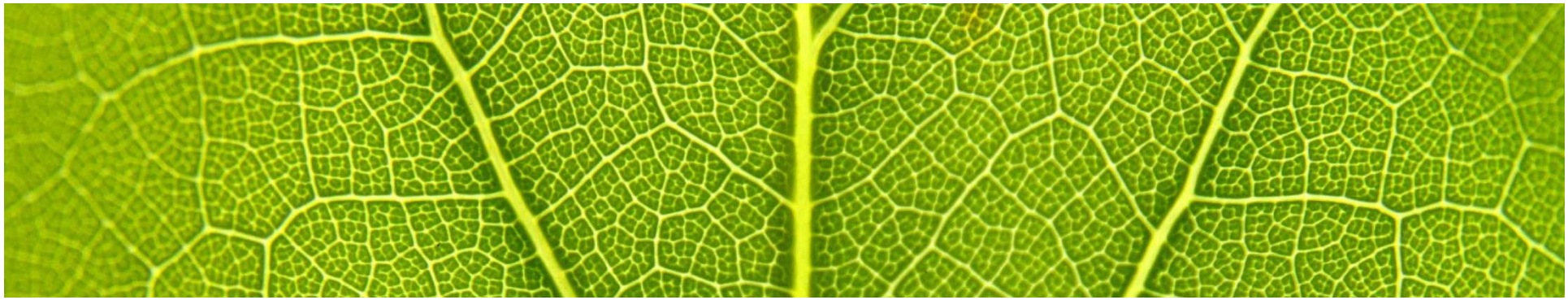
generation foundation

ECOFYS
sustainable energy for everyone

NTNU

PBL Netherlands Environmental Assessment Agency



Official launch of the report

CARBON PRICING UNLOCKED
CARBON PRICING FOR SUSTAINABLE GROWTH

Impacts of a global carbon price on consumption and value creation

Implications for carbon pricing design

17/11/2016 – 10:30-12:00

COP22 - EU Pavilion Brussels, Blue Zone

The research partnership

CARBON PRICING UNLOCKED
CARBON PRICING FOR SUSTAINABLE GROWTH

> Three-year research partnership between the **Generation Foundation** and **Ecofys**, from 2016 until 2019

> Key research question: **How can carbon pricing facilitate sustainable global economic growth?**

> **Five topics** to address the key research questions

> Topic 1 (this presentation): **umbrella topic** for consecutive four topics

> Work plans for topic 2 (internal carbon pricing) and topic 3 (carbon pricing revenues) currently in the making

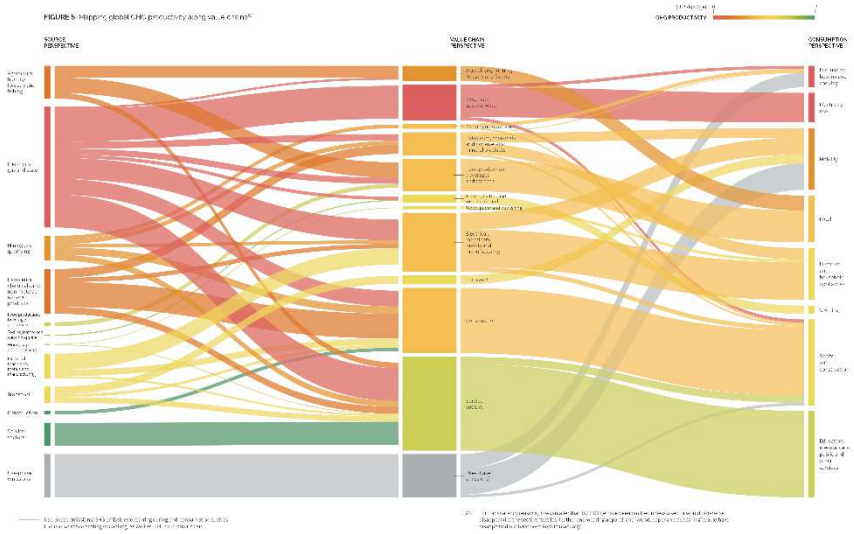
> Any **collaboration** with interested parties is very much welcomed

Our approach for Topic 1

> For **Topic 1**, the partnership team **collaborated** with the Norwegian University of Science and Technology and PBL Netherlands Environmental Assessment Agency

A global GHG productivity map

- A **global GHG productivity map** showing the relationship between **GHG emissions** and **value creation** in **global value chains** using three perspectives
  - Source perspective
  - Value chain perspective
  - Consumption perspective



- Focus on **eight** different **consumption categories**: fuel use, electricity use, mobility, food, furniture and Appliances, mobility, clothing, shelter and construction and services

- Analysis allows to calculate "**value at stake**" and "**impact on consumer prices**" and to derive recommendations on the design of effective carbon pricing policies

Nine implications for carbon pricing

CARBON PRICING UNLOCKED
CARBON PRICING FOR SUSTAINABLE GROWTH

1. A **global carbon price** is unlikely to cause major shifts in consumption patterns between materials, food and services.

2. Majority of GHG **emissions** occur **upstream**, whereas **value creation** happens more **downstream**.

3. The carbon price is not always passed on in the value chain and does not **incentive** lower GHG emissions **downstream**.

4. Carbon pricing approaches are needed that incentivise higher GHG productivity throughout **full value chains**.

5. Large consumer-facing companies can apply **internal carbon pricing** approaches to tackle own and supply chain emissions.

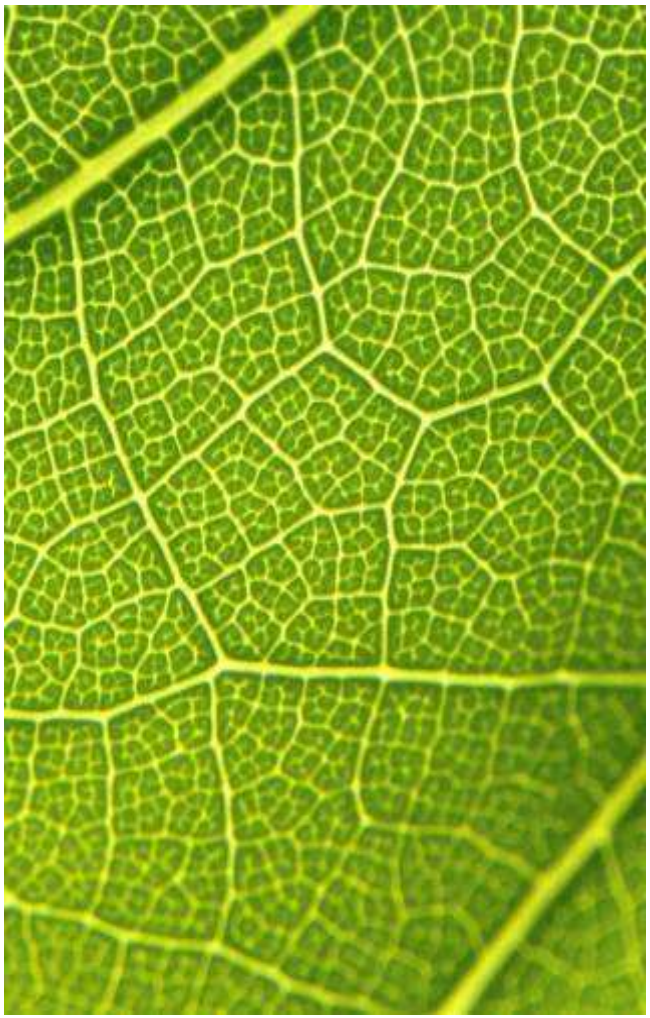
6. **Public entities** could further step up in requiring the construction supply chain to **disclose** information on GHG productivity.

7. Consumption of electricity, fuel use for heating and cooking, and mobility are **attractive candidates** for carbon pricing.

8. For **cost-effective decarbonisation**, competing technologies fulfilling the same require a **similar carbon price**.

9. **Income distribution effects** resulting from carbon pricing policies need sufficient attention. **Revenue recycling** approaches could be used to compensate for undesirable effects.

Collaboration and contact details



- Our partnership welcomes **collaboration** with interested parties
- To receive **news and updates** about our partnership, please sign up at cpu@ecofys.com
- Contact **Ecofys**:
  Noémie Klein – Principal consultant
  cpu@ecofys.com
- Contact **Generation Foundation**:
  Daniela Saltzman – Director
  genfound@generationim.com