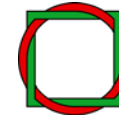




POLFREE

POLICY OPTIONS FOR A
RESOURCE EFFICIENT ECONOMY



Wuppertal Institute
for Climate, Environment
and Energy

Policy Mixes for Resource Efficiency – Theoretical and practical challenges

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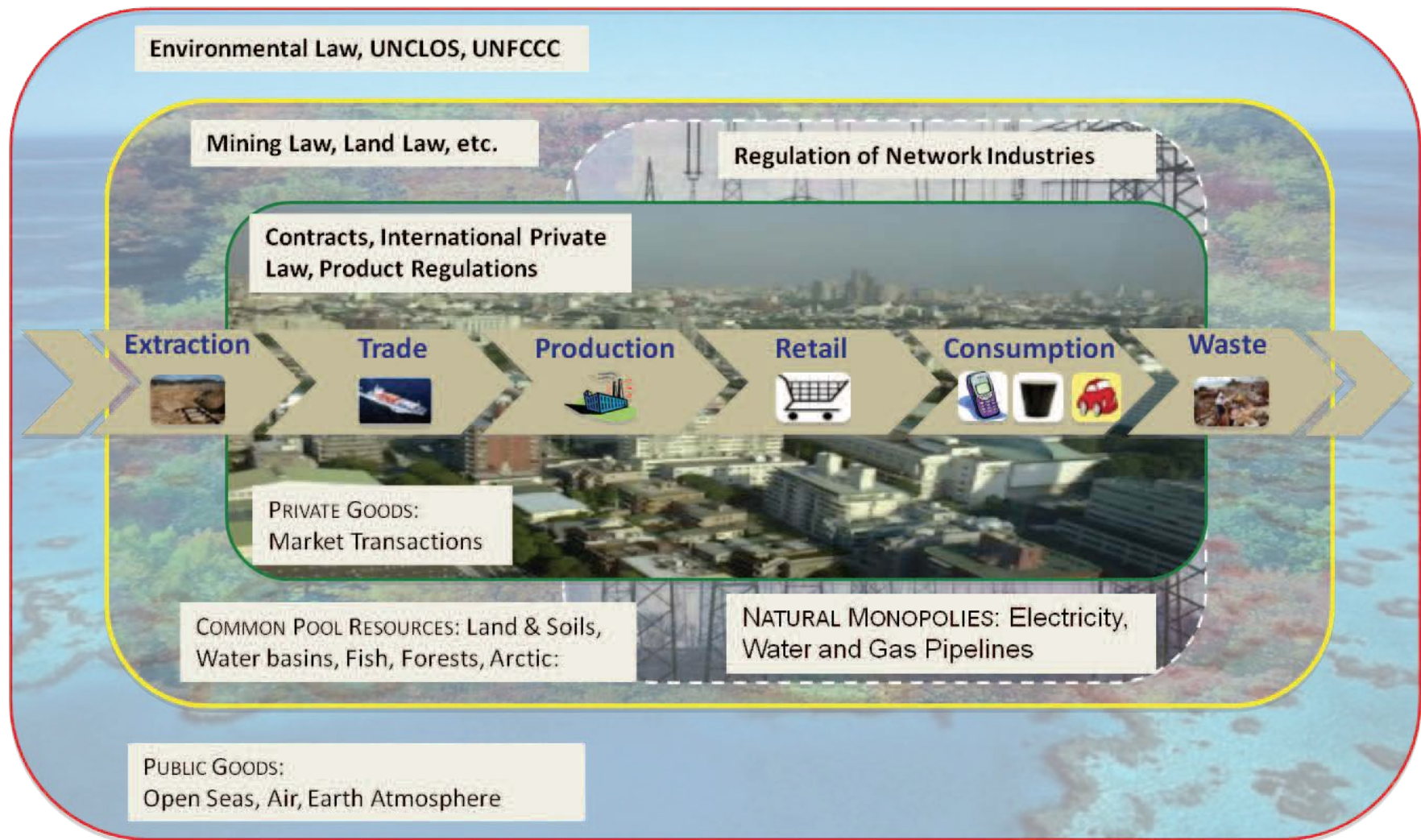
Davos, October 13, 2015

Henning Wilts

Outline

1. What kind of policy framework is needed to boost resource efficiency in Europe and leads to total reduction of both primary resource use and global environmental burdens?
2. How can such a policy framework be formulated and implemented?
 - Conceptual framework
 - Exemplary results: From waste disposal towards a resource-efficient circular economy
 - Conclusions

Institutions and actors of resource markets: polycentric and multi-level governance



Source: Transatlantic Academy 2012



Criteria for a Policy Mix

3 main characteristics of a policy mix:

➤ consistency, coherence, credibility

Consistency

➤ „ The state of a policy mix that is characterized in its weak form by the *absence of contradictions* and in its strong form by the *existence of synergies within and between the elements of the policy mix, (...)*“

- interaction between different policies (instruments already in place and new ones), mutual benefits with existing policies,
- negative interactions among instruments,
- target conflicts with fundamental social policies



Criteria of a Policy Mix

Coherence of processes

- Focus on the process dimension („referring to the processes of policy making and implementation, ensuring that the elements of the policy mix are not in contradiction with one another or may even reinforce one another”)
- Resource efficiency: policy integration and coordination

Credibility and stability

- Extent to which the policy mix is believable and reliable
- Influenced by a range of factors (commitment from political leadership, operationalization of targets by a consistent instrument mix and delegation of competencies)
- Stability of targets may influence credibility

Topics for the Case Studies

List based on the policy mix workshop, stakeholder workshops and the POLFREE vision and pathways for resource efficiency

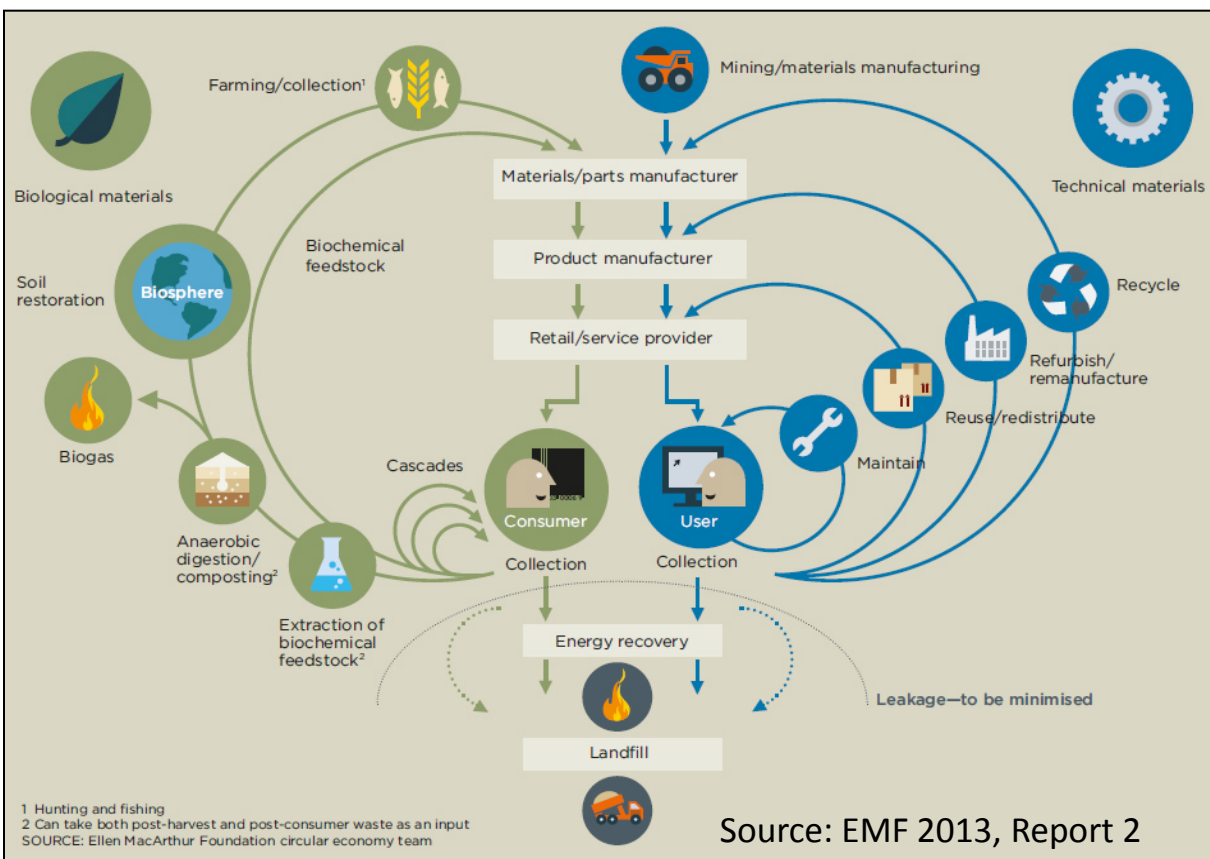
- 1) Minimization of food waste losses alongside the value chain
- 2) Zero energy and material efficient buildings
- 3) Mobility
- 4) Electricity production and distribution
- 5) Industrial symbiosis network
- 6) Product Service Systems
- 7) Ecodesign Product Standards for a Circular Economy
- 8) Phasing out EHS
- 9) Internalization of costs

Outline

- Conceptual framework
- **Exemplary results: From waste disposal towards a resource-efficient circular economy**
- Conclusions

Towards a circular economy: Context

„Transition to a more circular economy requires *changes throughout value chains, from product design to new business and market models, from new ways of turning waste into a resource to new modes of consumer behaviour.*



This implies full systemic change, and innovation not only in technologies, but also in organisation, society, finance methods and policies. (European Commission 2014)“.

Towards a circular economy: Context

High expectations

- resilient growth, reduced dependency on resource markets
- significant impact on innovation, employment, and capital productivity
- annual net material cost saving potential **up to USD 380 billion** (€ 279 billion) in a *transition scenario*; **up to USD 630 billion** (€ 463 billion) in an *advanced scenario*

Reality

- **total waste production in the EU (2011): 2.5 billion tonnes**
 - 40% of MSW recycled, 37% landfilled, 23% incinerated (of which **500 million tons** could have been otherwise recycled or reused)

➤ *“The Union thus misses out on significant opportunities to improve resource efficiency and create a more circular economy leading to economic growth and jobs which in turn would reduce greenhouse gas emissions and its dependency on imported raw materials.” (EC 2014)*

Towards a circular economy: Context

Need for better policies

- Roadmap for a Resource Efficient Europe: „*By 2020, waste is managed as a resource. (...)*” (EC 2011)“.

Polfree Vision: In 2050 „*the EU continues to be largely dependent on imports of metals, but the scale of imports has been reduced [...] Materials are managed so that they do not become waste. [...] High quality recycling is ensured.*”

Clear need for innovative policy instruments

- higher priority for re-use and recycling
- combination of policies that take into account the full value chain (e.g. product design integrating a life-cycle approach, better cooperation along market actors, better collection processes, etc.)



Towards a circular economy: Instruments

- (1) Setting incentives for a more resource efficient product design by ***individual responsibility of producers***

- (2) Specific ***eco-design requirements*** that make reuse and repair of products economically viable

- (3) Establishment of ***waste targets that focus on the production of high quality secondary resources – recycled content quota***

Towards a circular economy: Instruments

(3) Waste targets for resource efficiency

Mandatory recycled content target

- Classic approach: Mandatory recycling quotas
- Mandatory recycled content target for plastics as prerequisite for the recovery of secondary plastics
 - incentives to recycle a greater share of separated plastic wastes
- Problems:
 - access of manufacturers to secondary raw materials
 - traceability of material flows (e.g. by a proof of origin)
 - inclusion of non-European recyclers to the certification system
 - Plastics might be replaced by raw materials with probably higher resource requirements

Outline

- Conceptual framework
 - Exemplary results: From waste disposal towards a resource-efficient circular economy
 - **Conclusions**
- **If resource efficiency and the circular are win-win concepts, why don't we see faster progress?**

Conclusions from the analysis of key design features

- The more ambitious an instrument, the lower the immediate profitability for the actors involved
 - Trade-off between instruments that offer the highest potential increases for resource efficiency and those that could be easily implemented due to market incentives
 - Process of designing policies for resource efficiency can not be based on the instrument, but needs to take into account political economy aspects:
 - the higher the general acceptance for resource efficiency policies, the more stringent instruments can be implemented
 - especially if the instruments aim at influencing or regulating the consumer side

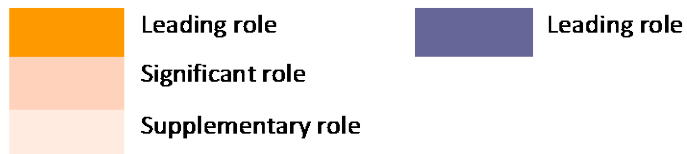
Conclusions from the analysis of key design features

- Trade-off between the predictability of an instrument and its flexibility
 - Instruments are considered more efficient if the evolution of tax rates, recycling rates etc. is foreseeable so that actors can adapt
 - The self-binding character of an instrument negatively influences flexibility that would allow policy makers to react on external factors (like technology or market developments)
 - Specific measures can include a transparent mechanism of revising instruments to make the costs related to mis-investments more predictable.

Conclusions from the analysis of key design features

- Trade-off between the level of specificity of an instrument and its depth, the level of inclusions of up- and down stream actors
 - Policy instruments benefit from a design that enables to take into account external circumstances (like specific economic, cultural, social etc. aspects)
 - A specific focus makes it more challenging to include actors outside of this specific situation
 - Technical regulations or permitting procedures allow to very systematically take into account plant-, region- or sector-specific aspects
 - Market-based instruments show clear strengths to address specific links of the value chain and to *set incentives that can be passed on* (e.g. in the case of material extraction taxes)

Coherency



⌘

		Initiation Level					
		Sectoral	Global	EU	National	Regional	Local
Minimization of food waste losses alongside the value chain/ Changing diets	Resource efficiency across the supply chain - Supporting cooperation, capacity building and innovation						
	Green Public Procurement						
	Courtauld commitment of food waste prevention						
Zero Energy and material efficient buildings	Landfill bans and landfill targets on C&D waste						
	End of life of buildings and building passports						
	Promoting “co-housing alternatives” and living together through economic and planning instruments						
Fuel efficient mobility	Strict CO2 emission standards						
	Vehicle and road tax						
	Prioritizing urban non-car infrastructure						
Electricity production and distribution	Smart grid						
	Effective levels of carbon taxation through changes in the ETS and carbon border adjustments						
	Integrated micro-generating systems and through incentives and subsidies in industries and households accompanied with energy efficiency audits						

Conclusions from the analysis of key design features

Consistency

➤ Focus on contents



Coherency

➤ Focus on process dimension

- Fragmentation of responsibilities for initiating resource efficiency policies
- Many instruments highlight the importance of national and even sub-national approaches
- Innovative approaches to include sectoral actors on the global scale will be needed

Thank you very much for your attention!



For more information please see the
Polfree project website or
www.wupperinst.org