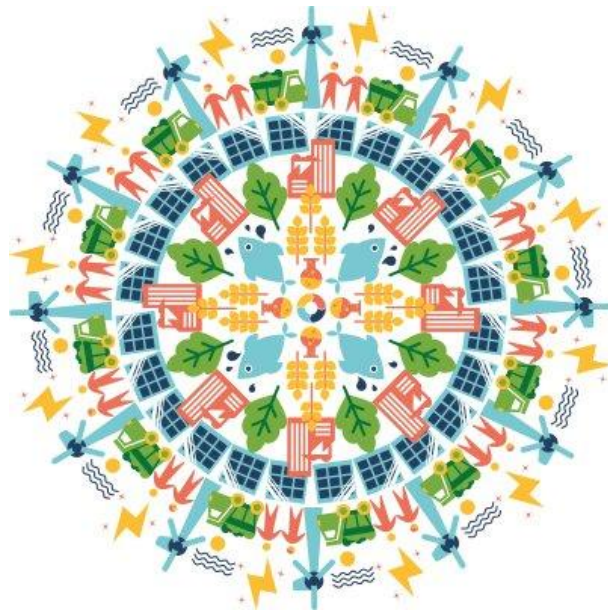


Shaping local government attitude to sustainability transition: the case of Gela refinery conversion into a biorefinery

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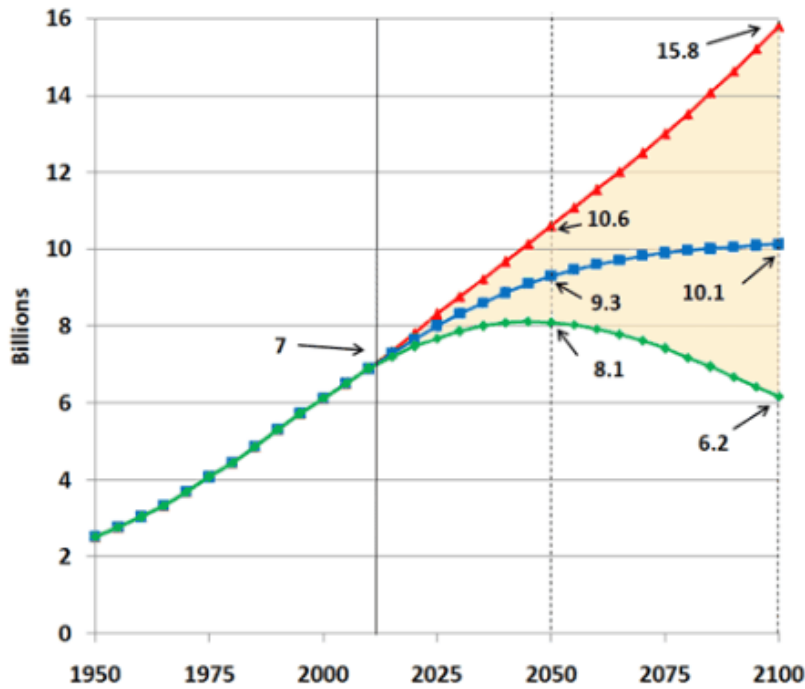
Ecomondo, Rimini, 9th November 2018.

Outline of the presentation

- Motivation
- Methodological design
- Results and discussion
- Conclusions

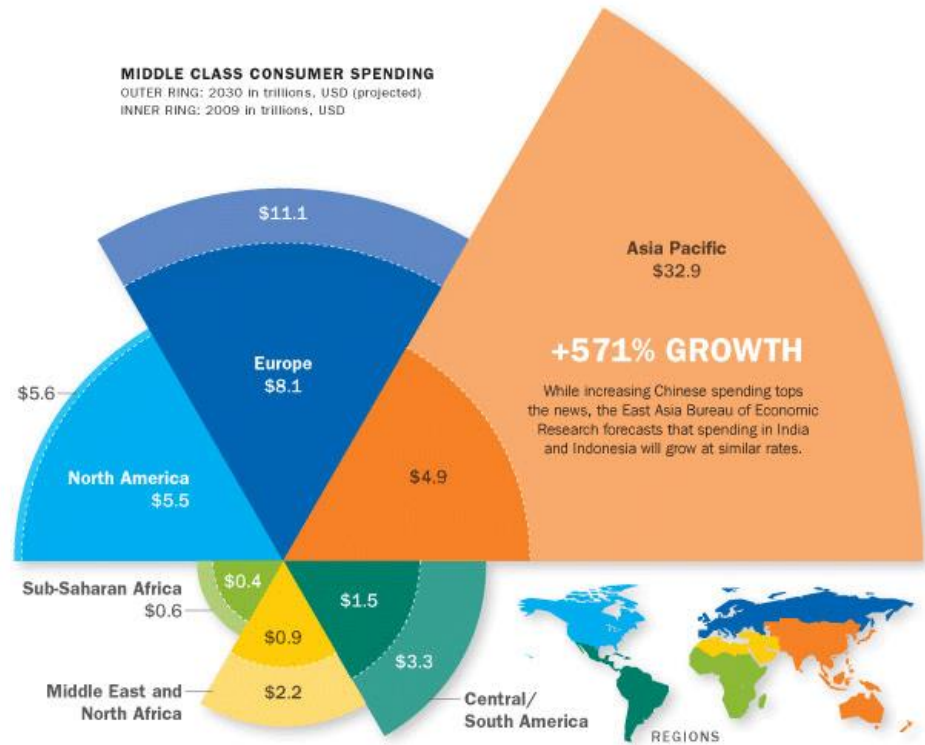
Megatrends

world population and income growth

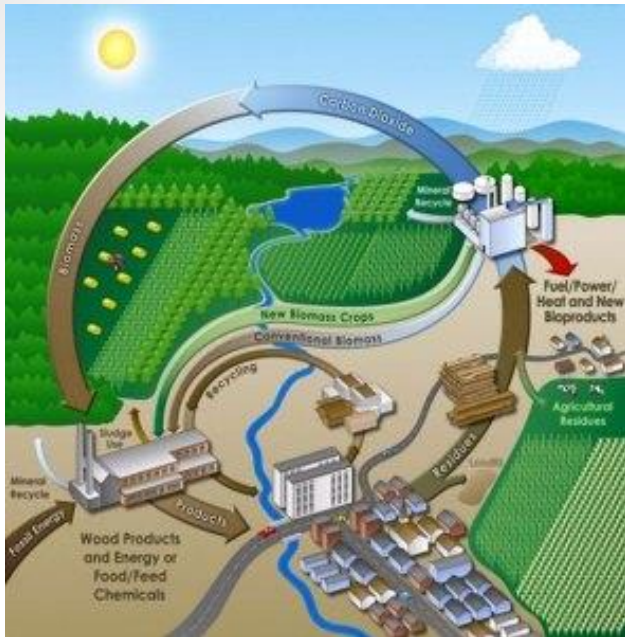


UN projection of population growth under high-medium-low fertility assumption

The explosion of the middle-class



- Current production and consumption models are largely *unsustainable*
- Modern high-income societies are entering into a phase of *post-consumerism* (e.g. Cohen, 2013)
- The *energy system* is a very relevant case in point
- The *energy transition* must take place also from a social and governance point of view, stimulating awareness and common knowledge (e.g. Falcone, 2018)



- **Integrated biorefineries** are facilities that use biomass conversion processes and equipment to produce any combination of renewable fuels, power, heat, steam, and chemicals from biomass.
- They have been widely identified as the most **promising route** to the creation of a new bio-based fuels and chemicals industry (EC, 2015).

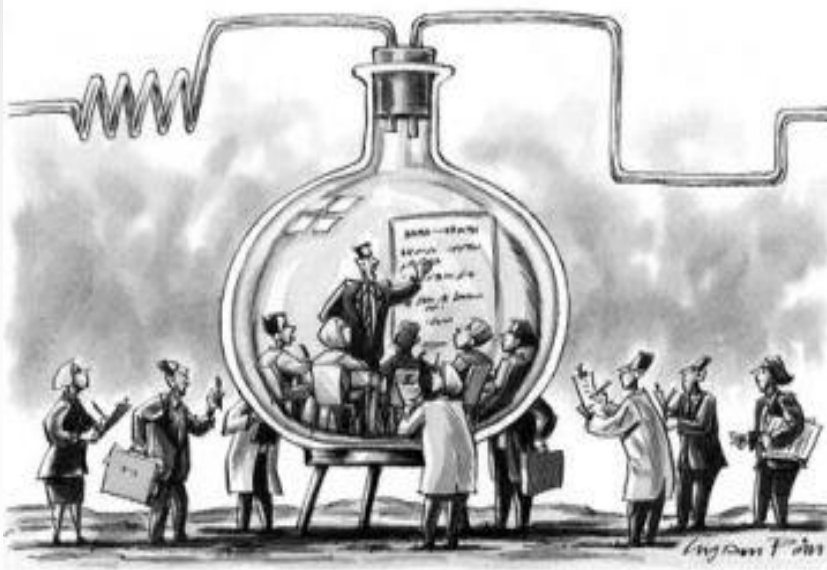
- The **urban context** represents a relevant socio-cultural and political framework for investigating the process towards sustainability.
- Different social dynamics, cultural values and political activities that take place at urban level may give rise to different **transition pathways** (Franziska et al., 2017).





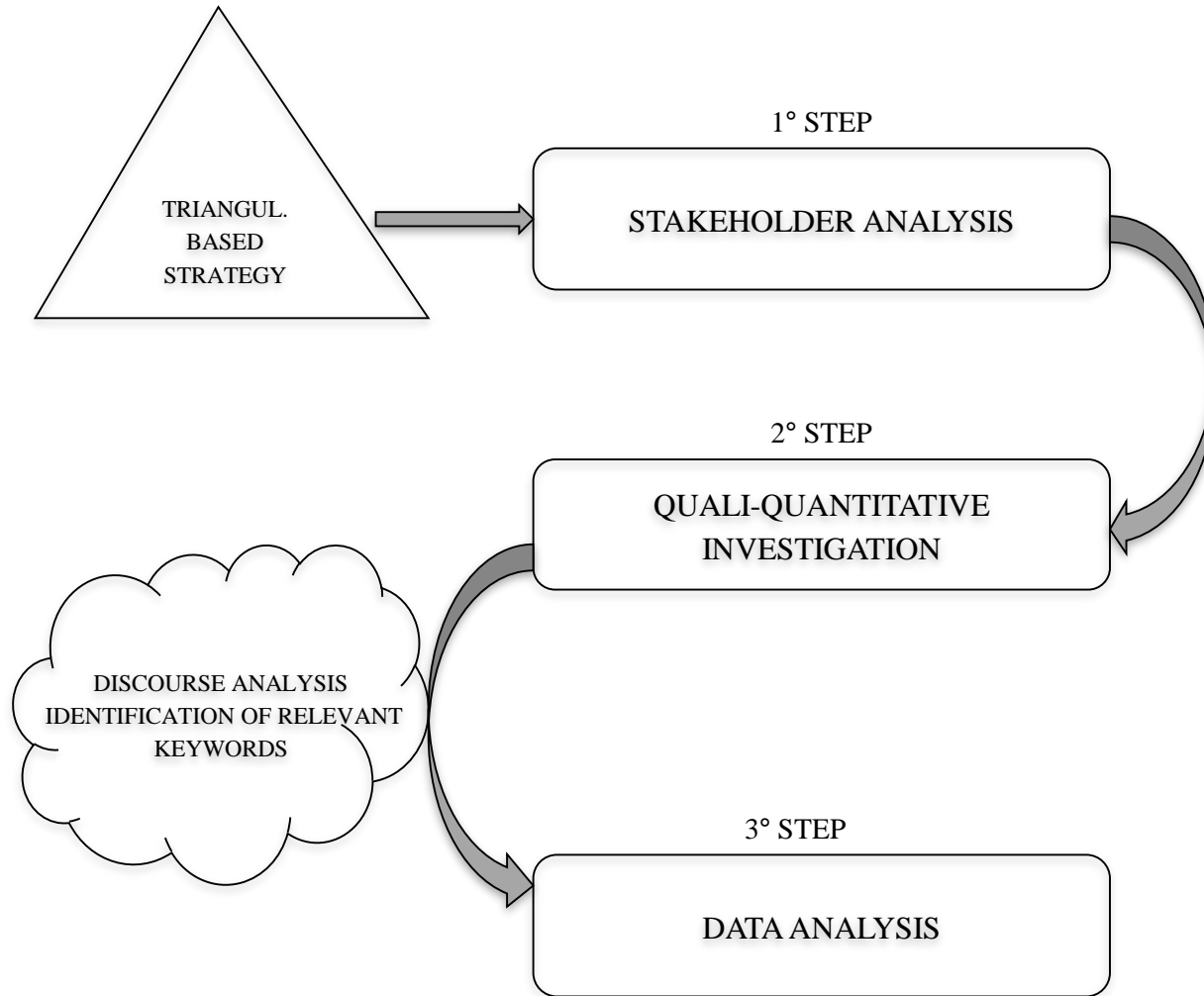
Gela refinery

The reconversion path of the Gela refinery represents an interesting case of investigation for understanding socio-political dynamics pathways based on actors' awareness and motivations to support a radical forms of energy transition.



- A stakeholder analysis has been performed for identifying actors potentially influencing the socio-political system with the aim of eliciting, in a subsequent stage, their perceptions towards the biorefinery reconversion processes, by means of semi-structured interviews.
- In adopting this focus, the paper builds upon the AMP framework of institutional change since it provides an useful empirical direction for studying key aspects of energy transition.
- Data analysis has been performed by means of QDA Miner 5.0 software package that allowed performing a qualitative assessment of the text in which relevant keywords appeared.

A three-step methodology was followed:



The figure below reports a summary of the empirical findings emerged from the interviews.

Awareness	Motivations	Pathways
<p><i>Biorefinery</i></p> <p>↓</p> <p><i>environmental sustainability</i></p>	<ul style="list-style-type: none"> • Pollution reduction and land remediation • Utilization of otherwise not marketable waste resources • Mitigation of climate changes • Lack of environmental culture in the local community 	<ul style="list-style-type: none"> - Supporting scientific and technological collaborations among actors - Promoting information campaigns
<p><i>Biorefinery</i></p> <p>↓</p> <p><i>opportunity for socioeconomic development</i></p>	<ul style="list-style-type: none"> • Local impacts in terms of value added and employment • Building infrastructures • Low level of qualified workforce • Excessive bureaucracy 	<ul style="list-style-type: none"> - Sectorial tax relief and production incentives - Promoting infrastructural investments - Implementing training course tailored to advanced biorefineries - Simplifying administrative procedures

Several challenges and opportunities in the reconversion process of the Gela refinery have emerged. Building on these, the study identified the following pivotal strategies in managing socioeconomic and environmental contexts so as to trigger the ongoing energy transition in Gela municipality:

- 1. *Supporting scientific and technological collaborations***
- 2. *Promoting information campaigns***
- 3. *Sectorial tax relief and production incentives***
- 4. *Promoting infrastructural investments***
- 5. *Implementing training course tailored to advanced biorefineries***
- 6. *Simplifying administrative procedures***

The empirical findings seem to highlight:

- ✓ The general stakeholders' awareness about possible socio-economic and environmental benefits related to the local energy transition.
- ✓ The necessity for policy makers to go beyond a simple “best option” approach.
- ✓ The complexity of processes at the basis of the sustainability transitions, clearly showing that policy interventions are very context-dependent.
- ✓ A limitation of this study since it is based upon the qualitative characterization of the AMP framework.

תודה
Dankie Gracias
Спасибо شكراً
Merci Takk
Köszönjük Terima kasih
Grazie Dziękujemy Děkojame
Ďakujeme Vielen Dank Paldies
Kiitos Tänname teid 谢谢
Thank You Tak
感謝您 Obrigado Teşekkür Ederiz
Σας Ευχαριστούμ 감사합니다
Бодхон Bedankt Děkujeme vám
ありがとうございます
Tack