

Sustainable Urban Mobility and Urban Planning

Lecture 2:

Problems and challenges in the governance of
sustainable mobility and urban planning

Contents

1. Assignment;
2. Sense of urgency;
3. Problems;
4. Challenges;
5. An analytical framework;
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Exercise

- What do you think is a major problem in the governance of sustainable mobility?
- What do you think is a major problem in the governance of a sustainable urban planning?
- How can we improve this governance?

Discuss with your neighbor (5 min.)



useoftechnology.com (2014)

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Sense of Urgency (1)

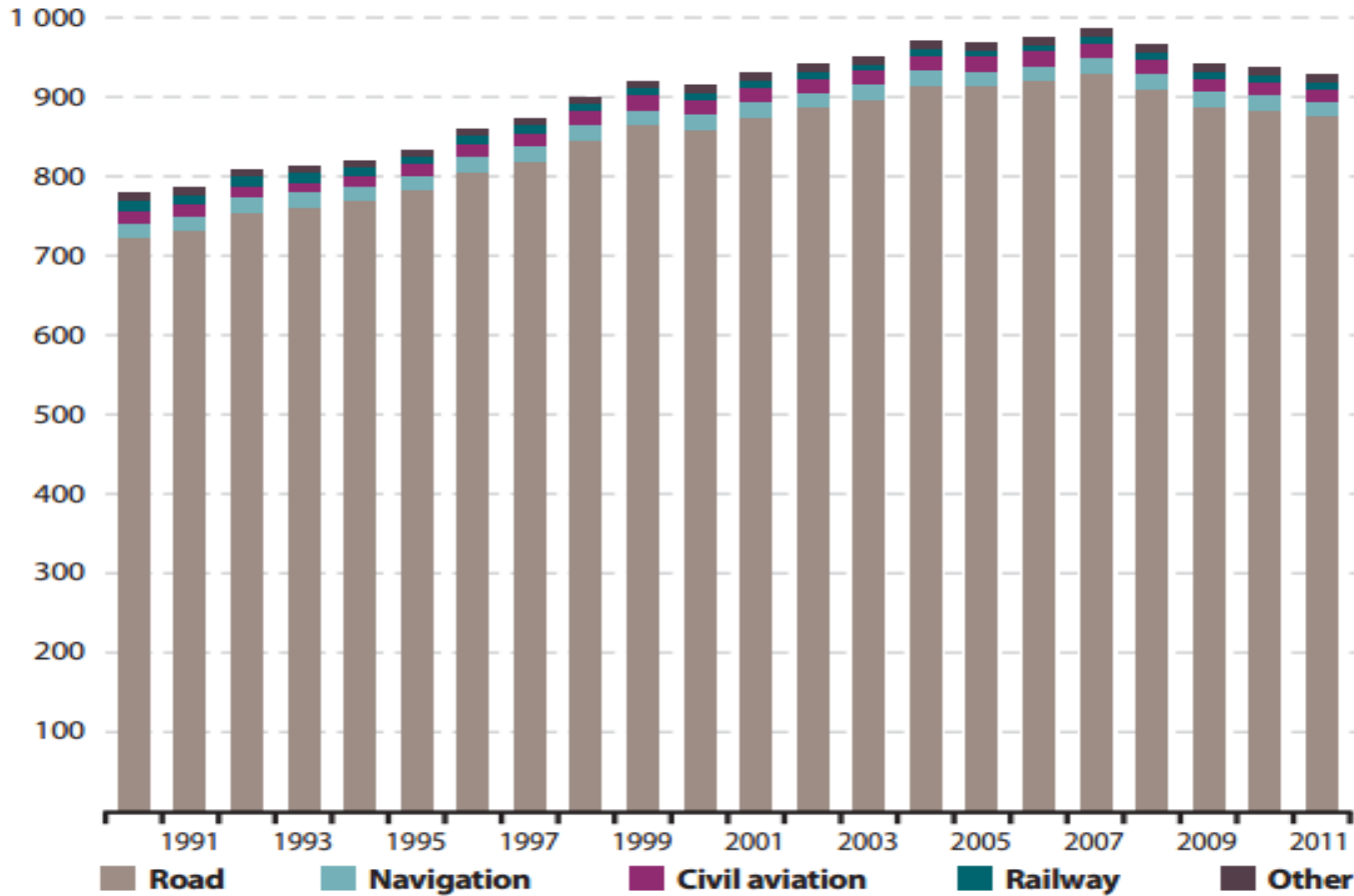


Figure 1:

Greenhouse gas emissions from transport, by transport mode. EU-28, million tonnes of CO₂-equivalent.

Source: EUROSTAT (2014)

Sense of Urgency (2)

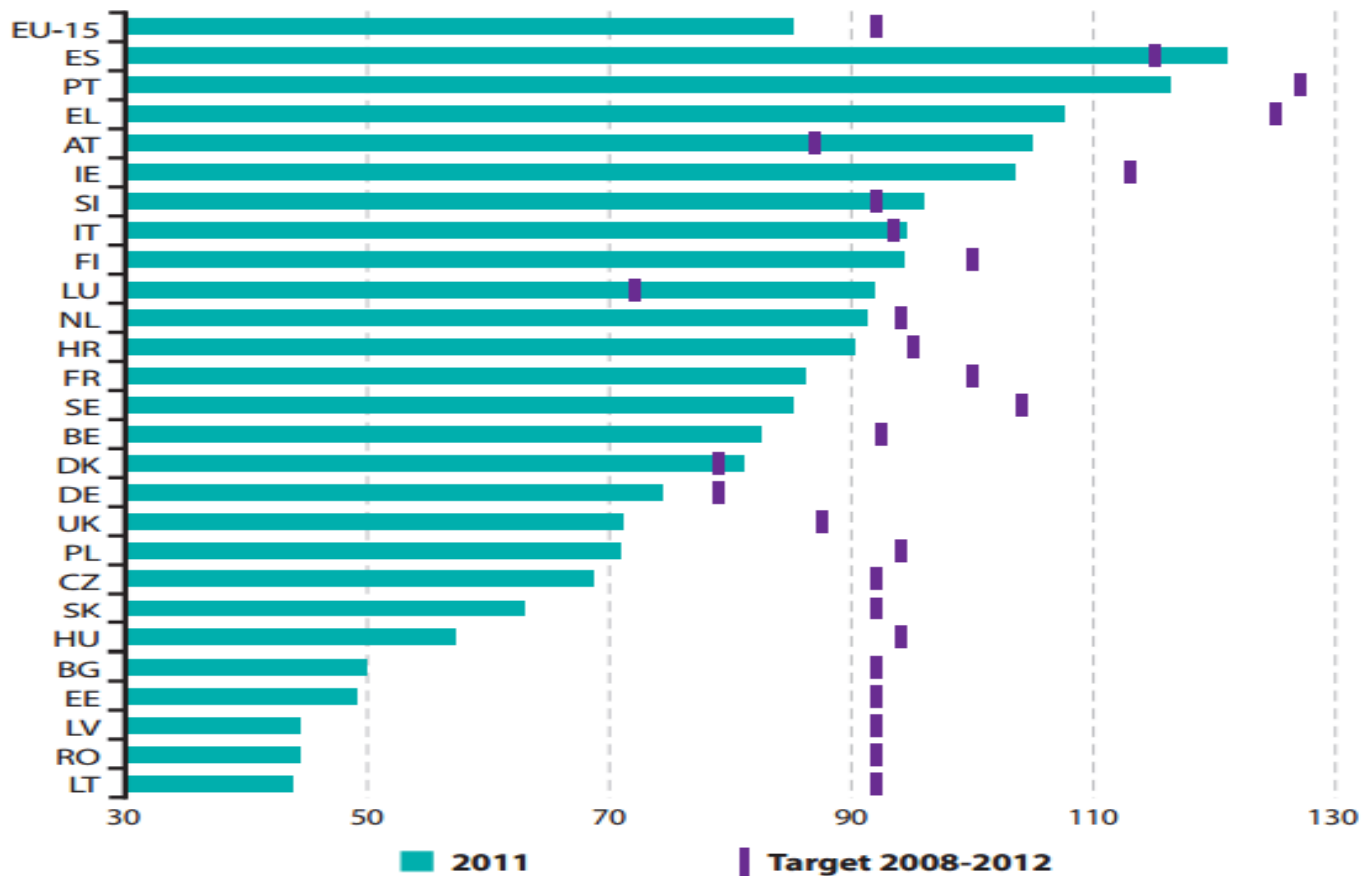


Figure 2:

Index of greenhouse gas emissions in 2011 compared with Kyoto base year and agreed reduction targets for 2008-2012

Source: EUROSTAT (2014)

Sense of Urgency (3)

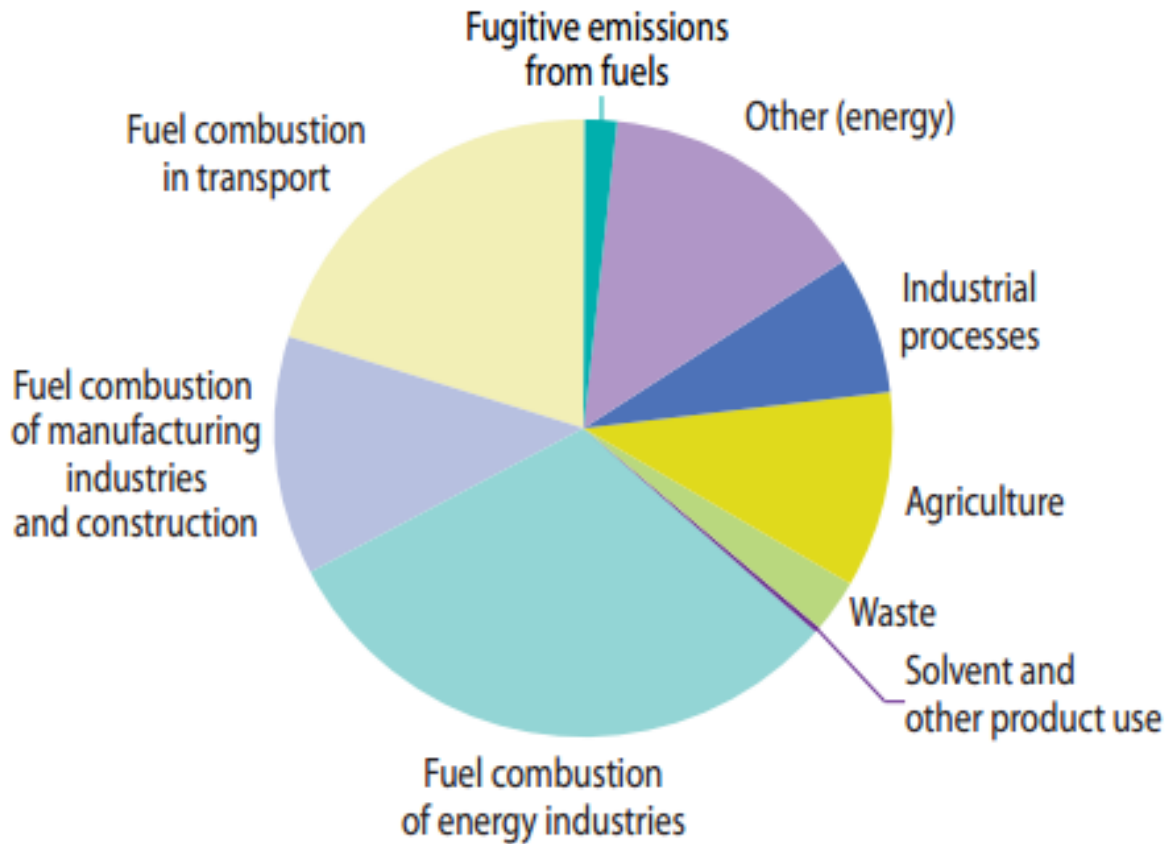


Figure 3:

Greenhouse gas emissions, breakdown by inventory sector, EU-28, 2011 (%)

Source: EUROSTAT (2014)

Sense of Urgency (4)

The following findings can be reported (Eurostat, 2014):

- From 1990 until 2007 CO₂-emissions related to transport have increased from less than 0,8 mrd tonnes to almost 1 mrd. tonnes. Since 2007 it has decreased only to some extent to 0,9 mrd tonnes (figure 1);
- In 2011, 6 countries met the Kyoto Protocol goals, while 21 countries did not meet these goals (figure 2);
- The Netherlands still needed to do some effort to reach the Kyoto-protocol goals, like Germany in 2011 (figure 2);
- France and the United Kingdom were far from reaching the Kyoto-protocol goals in 2011 (figure 2);
- 20% of all CO₂-emissions were related to transport in 2011 (figure 3).
- Though since 2007, CO₂-emissions caused by transport has declined in absolute numbers, transport still accounts for a large share of CO₂-emissions (figure 3).

Problems (1)

Beside the environmental impact of mobility, **governance-related problems** exist (Beenakker, 2013; Rotmans, 2005):

- Many (representatives of) citizens, local authorities, water boards, provinces etc. are involved into the governance of mobility all having individual interests and problem perceptions. An example is Randstad Urgent (unknown year);
- Economic, social and ecological impacts of mobility and urban planning initiatives are not known beforehand;
- Due a variety of interests, hidden agenda's and (financial) resources, the influence of actors is not transparant, resulting into management problems;
- Cost over-runs in mobility projects;
- Projects with long time horizons and often long project delays;
- Positive and negative effects which are not always proportionate for the individual actor;
- Positive and negative financial *and* societal effects which are hard to calculate;
- Political and project management cycles do not function paralell.

Problems (2)

The aforementioned governance-related problems are examples of **persistent problems** (Rotmans, 2005: 7-8), because these are:

- Complex due to multiple causes and consequences in wide range of societal domains (mobility and urban planning) which are deeply embedded in our societal institutions;
- Uncertain due to a lack of ready-made solutions;
- Difficult to manage, because of a large number of actors involved;
- Hard to grasp / difficult to interpret, since problem perceptions differ amongst actors involved into mobility and urban planning projects.

Problems... what is the problem?



thehindu.com (2014)



forbes.com (2014)

Challenges (1)

Concerning the **technical aspect** of mobility and urban planning:

- Limitation of mobility-related CO₂-emissions;
- Support of the intensive use of public transport;
- Strengthening the user friendliness of public transport;
- Mobility innovation (for instance: driving with solar cells; construction of green roofs);
- Technical connectivity between nodes of urban functions and mobility;
- Energy-efficient buildings and transport-modes;
- Green buildings.

Challenges (2)

Concerning the **governance aspect** of mobility and urban planning:

- Developing a governance model which enables a balance between economic, social and ecological claims;
- Developing a governance model which combines planning flexibility and long-term goal setting;
- Developing a governance model which enables the proportionate distribution of positive and negative effects over all actors;
- A governance model in which financial and societal effects are transparent and computable;
- No environmental-, social- and financial burden is put on future generations;
- Integration of land use and mobility (Verhetsel et al, unknown year);
- A governance model that prevents large cost-overruns;
- A governance model which enables policy integration (see next page).

Analytical framework (1)

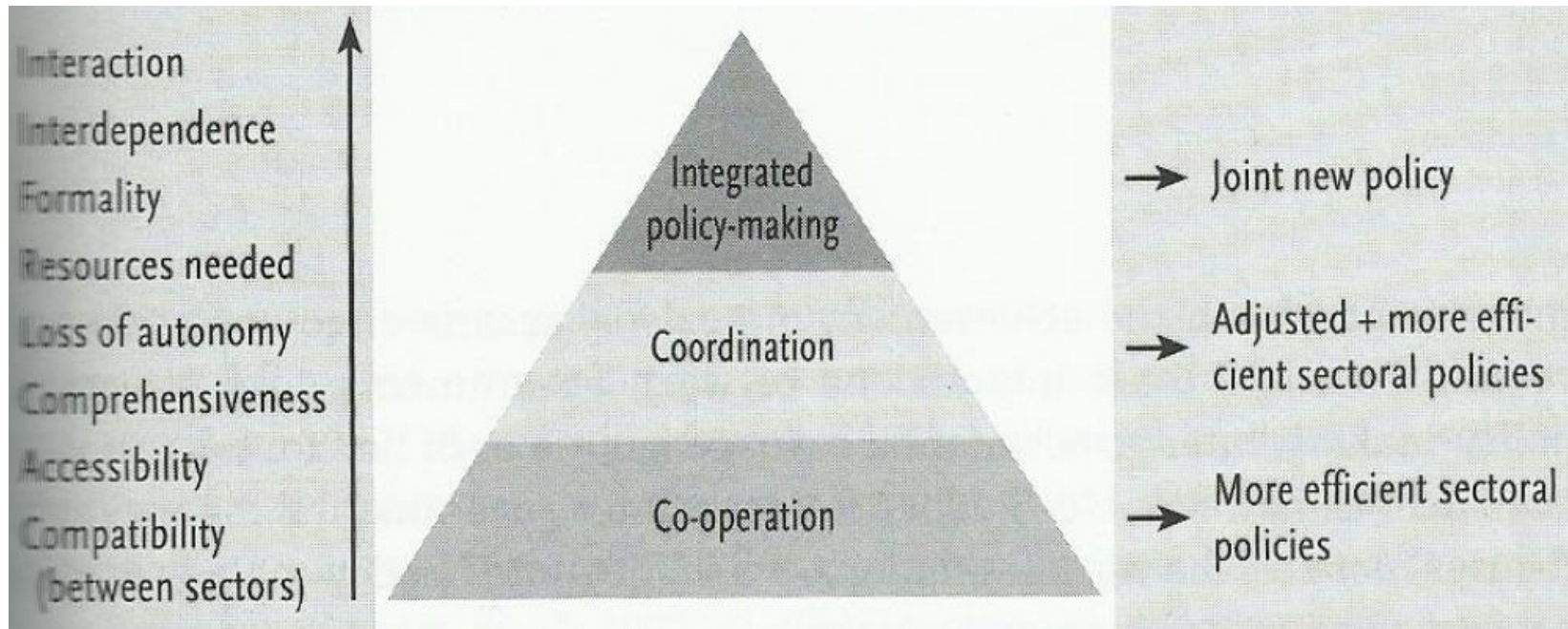


Fig. 1 : Integrated policy-making, policy coordination and cooperation
Source: Meijers, E. (2004).

Analytical framework (2)

Both mobility *and* urban planning are socio-physical systems. In practice this means:

- Distribution of land use determines where human activities take place and visa versa;
- Human activities require a transport system;
- A transport system makes certain locations accessible, while others are not.
- Land use will develop on accessible places.

In other words:

- Transport policy and location policy have mutual impact and effects;
- Transport policy and location policy allow human activities on certain places, while on other places it does not.

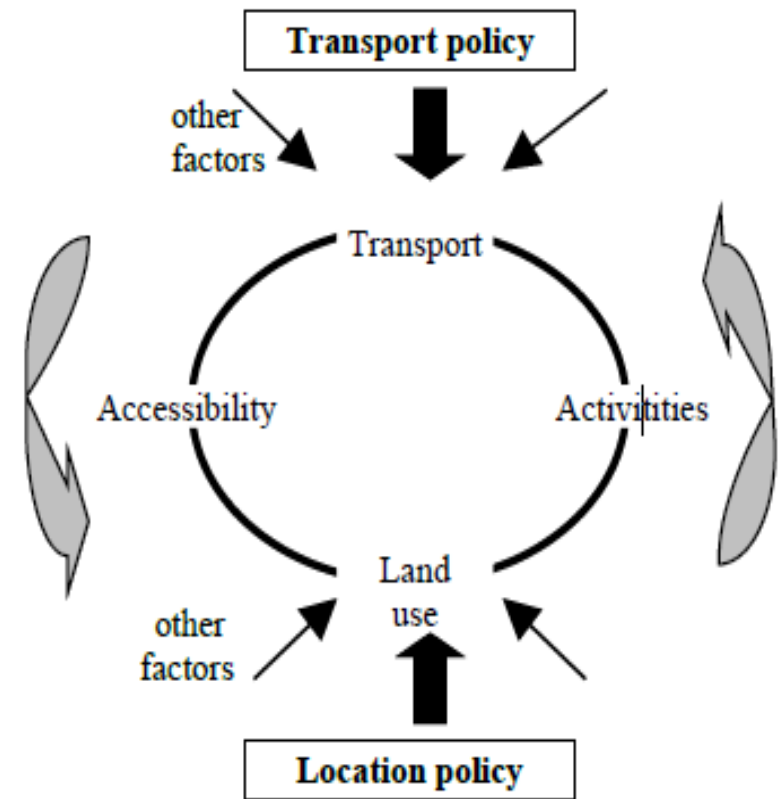


Fig. 2 : Relation between land use and transport.
Source: Wegener (2004) in Verhetsel et al (unknown year:2).

Conclusion

- The world faces a serious CO₂-emission threat, of which a large share is generated by transport-related activities;
- Sustainable mobility and -urban planning faces technical and governance-related challenges;
- Problems and challenges are complex, uncertain, difficult to manage and hard to grasp (Rotmans, 2005), i.o.w. 'persistent problems.'
- Both the policy integration model and the transport/policy integration model, are appropriate tools for an analytical framework which could describe the practices of sustainable mobility and -urban planning.

Sources

- ✓ Beenakker, I. (2013) *A historical perspective on urban planning in the face of complexity and uncertainty*. PhD research plan / unpublished paper.
- ✓ Eurostat (2014), Greenhouse gas emissions from transport, by transport mode. EU-28, million tonnes of CO2-equivalent. In: *Energy, transport and environment indicators. Eurostat Pocketbooks*, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-DK-13-001/EN/KS-DK-13-001-EN.PDF
- ✓ Meijers, Evert (2004) Policy integration. A literature review. In: Stead, D., Geerlings, H. & Meijers, E. (2004) *Policy integration in practice*. The integration of land use planning, transport and environmental policy-making in Denmark, England and Germany, DUP Science, Delft, pp. 9-21.
- ✓ Randstad Urgent (unknown year), *Stand van de Randstad*.
- ✓ Rotmans, Jan (2005), *Societal Innovation: between dream and reality lies complexity*. Erasmus University Rotterdam, Inaugural Address.
- ✓ Verhetsel et al (unknown year) *The relation between location policy and sustainable mobility: an empirical study for commuting in Flanders*. University of Antwerp.