



THE ENVIRONMENTAL IMPACT OF MOBILITY: NEW POLICIES AND SUSTAINABLE TRANSPORT SYSTEMS

VIENNA | 23 OCTOBER 2018 | HOLGER HEINFELLNER

ENVIRONMENT
AGENCY AUSTRIA **umweltbundesamt**^U

FACTS & FIGURES

- **founded in 1985** under the **Environmental Control Act**
- since **1999** under the legal status of a **Limited Liability Company**
- experience in more than **60 countries**
- more than **500 employees**
- more than **55 disciplines**
- more than **25 departments**
 - department of Mobility & Noise



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PREVIOUS EXPERIENCES IN CHINA

- Supporting the Design and Implementation of an Emissions Trading Systems in China
 - Contribution to policy briefings and technical guidance notes, expert meetings, trainings for competent authorities and “train the trainers” on MRV and ETS with a view of supporting the Chinese Government in developing and implementing an national ETS based on 7 pilot ETS.
- Providing guidance on Partnership for Market Readiness or Monitoring, Reporting and Verification training workshops in China
 - Design and Review of training materials for a PMR MRV Workshop and facilitation of the same.

STATUS QUO

The globe is warming ...

2016 was the hottest year on record

**so was 2015 and 2014
2017 on third place on record**

Due to the increasing concentration of anthropogenic GHG in the atmosphere

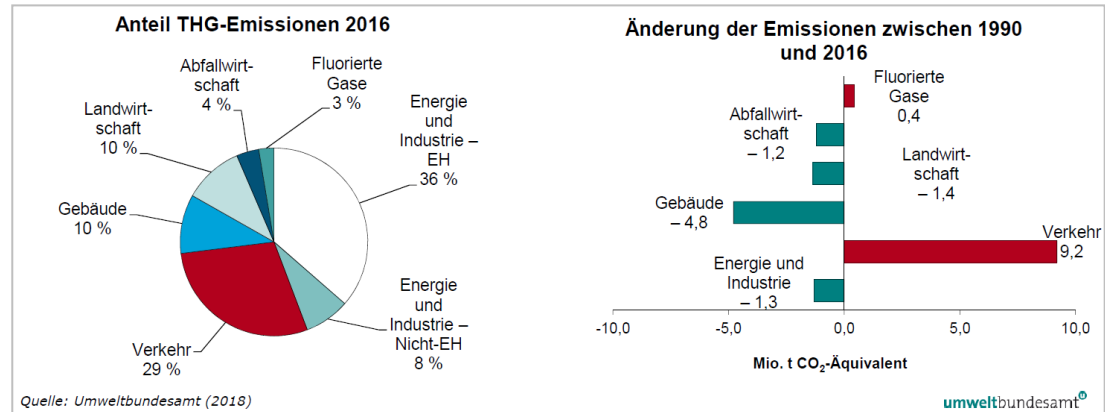
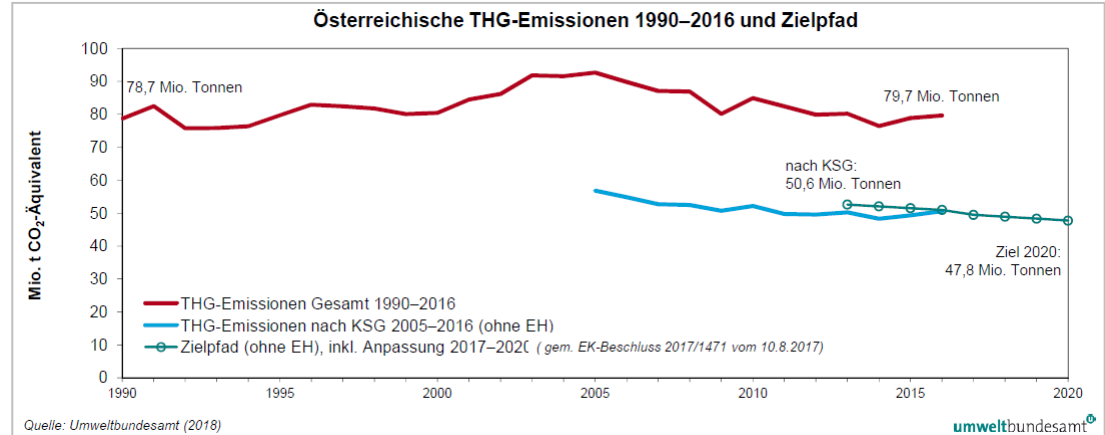
STATUS QUO

... with tremendous consequences

- **Glacial melting, the rise of the sea level** (currently around 3.2 cm per century)
- Increasing number of extreme weather extremes in terms of **dry phases** or **forest fires**
- **Intense rain with increasing probability and frequency of floods**
- Climate-induced **Migration**

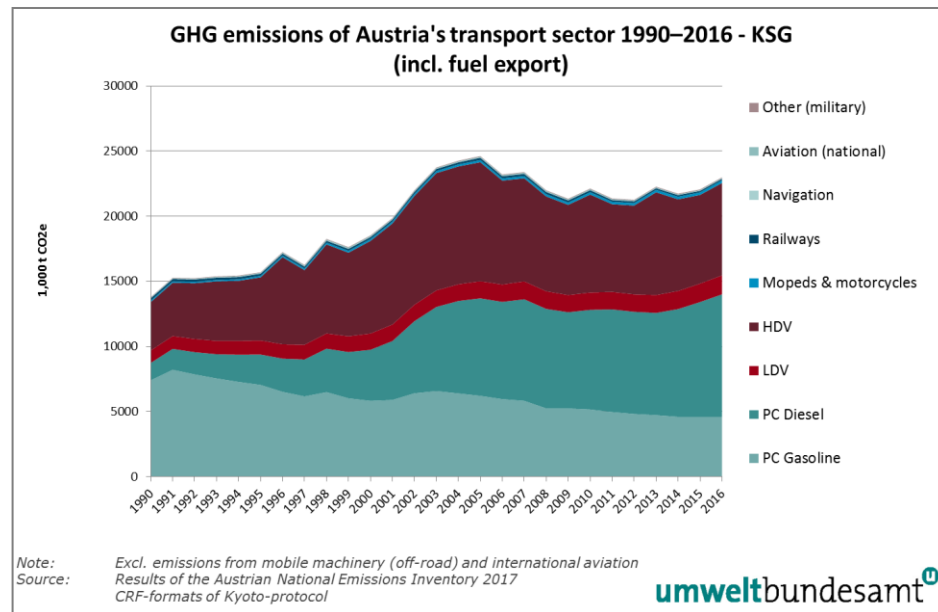
GHG IN AUSTRIA

- + 1.3 % in total GHG emissions in Austria (1990 to 2016)
- Transport contributing 29 % of all GHG-emissions in Austria
- Transport as one of the main GHG sources
- Transport related emissions also in other sectors
- Even increasing GHG-emissions from transport



GHG IN AUSTRIA

- 23 Mio. t CO₂eq from transport in 2016
- Increase of GHG-emissions from transport to the amount of 9,2 Mio. t CO₂eq (1990 to 2016)
- Development determined by 2 factors
 - Little technology driven progress as regards specific emissions
 - Significant increase in the mileage, especially regarding freight transport



POLICY ON INTERNATIONAL LEVEL

How the governmental international community is reacting



Paris Agreement:

- Keeping the increase in global average temperature to well below 2 °C above pre-industrial levels in 2050, if possible 1.5 °C
- This requires a reduction of total GHG by 80 % to 95 % compared to 1990 level
- This means almost zero emissions from Transport in 2050 as other sectors have to be compensated

POLICY ON EUROPEAN LEVEL



The Energy and Climate Strategy

- [COM(2010)639] Energy 2020: A strategy for competitive, secure, and sustainable energy
- [COM(2011)885] Energy Roadmap 2050
- [COM(2014) 15] A policy framework for climate and energy in the period from 2020 to 2030

Horizon	Targets		
	GHG (vs. 1990)	Renewable Energy	Energy Efficiency
2020	- 20%	+ 20%	+ 20%
2030	- 40%	+ 27%	+ 27%
2050	- 80% bis -95%	-	-

POLICY ON EUROPEAN LEVEL



The White Paper on Transportation

[COM(2011)144] Roadmap to a Single European Transport Area –
Towards a competitive and resource efficient transport system

- *Halve the use of 'conventionally-fuelled' cars in urban transport by 2030*
- *Phase them out in cities by 2050*
- *achieve essentially CO2-free city logistics in major urban centres by 2030*
- *30% of road freight over 300 km should shift to other modes such as rail or waterborne transport by 2030, and more than 50% by 2050*
- *By 2050, complete a European high-speed rail network*



POLICY ON EUROPEAN LEVEL



The Strategy on Decarbonisation

[COM(2016)501] A European Strategy for Low-Emission Mobility

Emissions from conventional combustion engines will need to further reduce after 2020. Zero- and low-emission vehicles will need to be deployed and gain significant market share by 2030



POLICY ON EUROPEAN LEVEL

Directive 2009/28/EC

Regulation (EU) No 333/2014

Directive 2009/33/EC



Regulation (EU) No 510/2011

Directive 2017/27/EU


Regulation (EU) No 443/2009

Directive 2017/27/EU

Directive 2016/2284/EU

POLICY ON NATIONAL LEVEL

#mission2030

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- 2011: Austrian Climate Protection Law
 - 2014: Austrian Energy Efficiency Law
 - 2018: National Energy and Climate Plans (NECPs) for Austria**

- Reduction of transport related GHG-emissions by 7.2 Mio. t CO_{2eq} (-36% to 2005)
- Almost CO₂-neutral transport sector in Austria until 2050
- > 50% newly registration emission-free PC and LDV until 2030
- Increasing the share of electrified rail-network in Austria to 85 % until 2030

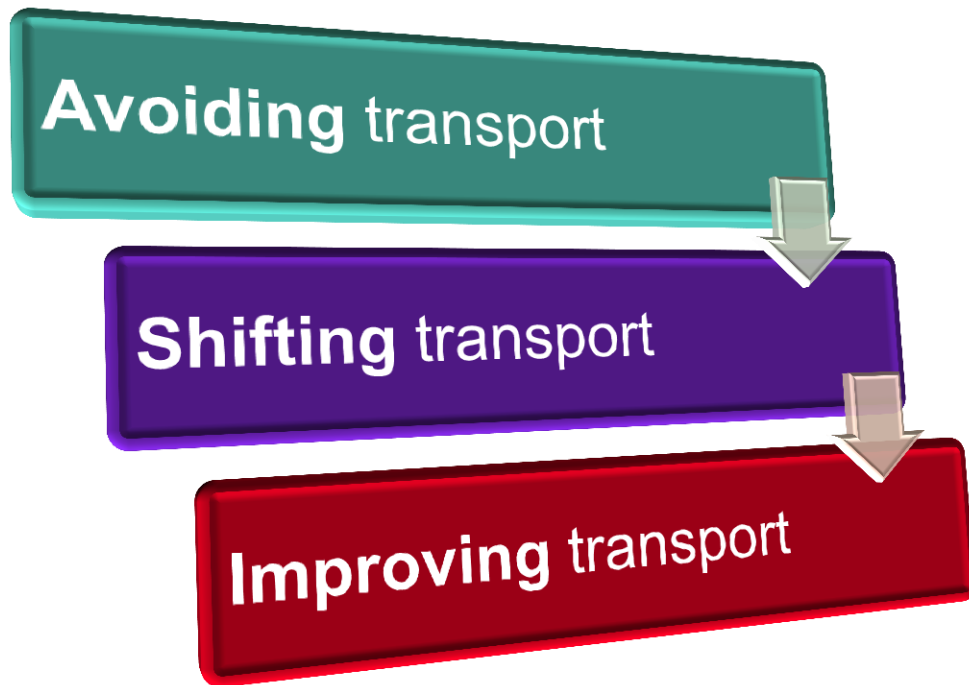
POLICY SUMMARY

There is a load of various policies, strategies, directives, regulations and partially even laws

- from all levels (international to regional)
- With various publication dates (up to 10 years old)
- defining mid- and longterm-goals explaining potential measures to get there
- With the common goal of a reduction of the negative impact of mobility on humans and environment

→ **But unfortunately, the intended impact can not be observed yet**

SHAPING A SUSTAINABLE TRANSPORT SYSTEM



SHAPING A SUSTAINABLE TRANSPORT SYSTEM

- Changing lifestyle and consumer behaviour
- Adapting land use planning and area zoning
- Strengthening the local economy
- Promoting carpooling, teleworking and teleconferencing
- etc.

Avoiding transport

SHAPING A SUSTAINABLE TRANSPORT SYSTEM

- Developing the infrastructure for active mobility
- Offering high quality public transport
- Developing intermodal interfaces, e.g. at railway stations
- Ensuring cost transparency and internalising external costs of various transportation modes according to the polluter pays principle
- Offering fiscal incentives for the usage of sustainable transportation modes
- etc.

Shifting transport

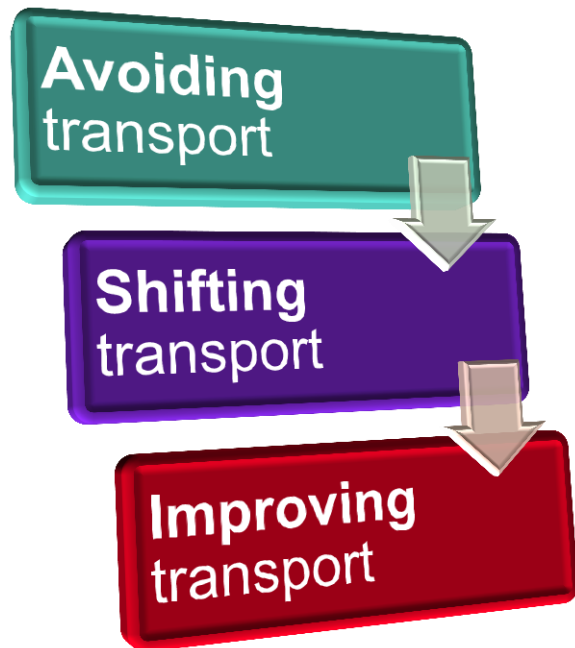
SHAPING A SUSTAINABLE TRANSPORT SYSTEM

Those trips, that can neither be avoided nor shifted to more sustainable transportation modes must be taken by vehicles and with fuels with the highest energy and resource efficiency and the lowest emissions ...

- Battery Electric Vehicle (with electricity from renewable sources)
- Fuel-Cell Electric Vehicles (with hydrogen from electrolyses, based on electricity from renewable sources)
- Biofuels
- Synthetic fuels

Improving transport

ACTIVITIES OF NGOs IN MOBILITY



- VCÖ – Mobilität mit Zukunft
- Radlobby Österreich
- Walk Space – der österreichische Verein für FußgängerInnen
- Bundesinitiative eMobility Austria

- Greenpeace
- Global 2000
- WWF

CONTACT & INFORMATION

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