



TDA Training Program on Transport Decarbonisation

Module 1

Policy Framework for Transport and Climate Change

 **Deployment:** Online / blended
 **Workload:** 3 hrs
Extra learning: 2 hrs



Module working group:

- Patrick Oliva – Paris Process on Mobility and Climate (Leader)
- Pedro Faria Gomes - EDP
- Pedro Filipe - Portugal

Learning outcome

After being reminded of the 2015 Paris Agreement on Climate and the latest advances in its implementation process (rulebook, Nationally Determined Contributions – NDCs, ...), trainees will be introduced to the "state of play" of the mobility/transport sector (certainly the most difficult sector to decarbonize in a relatively short timeframe), and will learn the pillars of policy action requested to successfully raise against the challenge of mobility GHG emission eradication (net zero emission) by 2050.

The course will predominantly draw from the TDA Manifesto "Decarbonizing transport by 2050" presented at COP 24 as well as from the PPMC Global Macro-Roadmap for Transport Decarbonization discussed at COP 22 and the SuM4All Global Roadmap of Action soon to be finalized.

At the end of the session, the trainees will be provided with a simple timeline of major scientific and policy actions related to climate change and they will have developed a clear understanding of what has been missing so far to initiate a clear inflection in the trend of GHG emissions with a structured conviction on what program to embark on - at national, city, company and society in general - to win the race against climate change.

To facilitate the acquisition-of-knowledge process and, at the same time, propose a frame of thought that is becoming widely used in transformative programs, all sections of the course will be presented according to the A-S-I (Avoid, Shift, Improve) methodology base.

This introductory module, devoted to policies, will lay the ground for further modules in which the policy facets will be further enriched as the course will propose greater details on specific topics.

Syllabus

Decarbonising transport is no easy task. It requires a thorough mesh of complementary policies and a strict enforcement of established rules; the pertinence of which people might not perceive immediately and must therefore be explained from the science of global warming (what human activities cause greenhouse gas emissions, how fast is global climate predicted to change, what will be the impacts of climate change) to the importance of transport decarbonisation to the reduction of global emissions.

A training program to help graduate students and professionals design and implement a comprehensive policy framework must encompass at least ten fundamental chapters on how to:

1 Incorporate decarbonization (net zero emission) in the law with public acceptance and engagement

Ambitious 2020 NDCs with a binding commitment to move away from GHG emitting systems must send a first signal but a law, fully discussed and enacted in a parliamentary process, must make the move irreversible and root the objective in everybody's mind.

In parallel to enacting the law, a joint governance process (including companies, cities, government and civil society) must be developed. As such, public acceptance and communication will also be addressed with a set of core principles of themes that could be used to assess proposed decarbonization activities and its impacts such as public acceptance, acceptance by political elites and differentiated cost/economic impact to individuals, companies and governments.

2 Develop UMPs (urban mobility planning) and NUMPs (National Urban Mobility Policies)

NUMPs ensure necessary consistency at national level (and should even involve supranational agreements when pertinent). UMPs must be adapted to local situations but must at least promote:

- Walking and cycling. Non-motorized mobility must be favoured in all areas of dense habitats (cities, villages, hamlets). It must become mandatory for mayors to:
 - Extend and secure pedestrian areas (pavements, plazas...) with no mechanical device whatsoever allowed in such areas. People can walk from age 1 almost throughout their entire life and safe walking is the basis of a healthy lifestyle.
 - Develop reserved lanes for bicycles. In most urban areas, cycling on well adapted lanes can be the fastest mode of mobility, usable by almost all (ages 7 through ~75), with a minimal use of public space
- "Mixed mobility" zones for motorized and non- motorized, with speed limited to 25 km/h. The objective is to foster non-automotive mobility by securing safe co-existence between modes: motorized 2Ws, other soft-mobility devices, cars, vans, trucks...
- Decarbonized last mile delivery solutions
- Formal and informal solutions for public transport

3 Regulate GHG emissions of in-land transport modes

It is critical to:

- Regulate all modes (including 2Wheels, trucks....)
- Design regulations dealing with "well-to-wheel" emissions and not "tail-pipe" emissions any more
- Define a progressive agenda leading to net-zero-emission by 2050 (which means potentially offsetting remaining emissions through dedicated negative emission programs)

4 Strive to go beyond current ICAO and IMO regulations

- Deepen climate-related transformations in WTO regulations framework. Participate in international standards and regulations
- ICAO (International Aviation) and IMO (International Maritime) rule international transport but are not ambitious enough. Domestic flights and domestic cabotage should be used to explore more advanced systems
- Current WTO laws are to be reformed to ensure that world trade growth is not going to jeopardize efforts to address climate change challenges
- Standard setting is a key element in the forthcoming economic competition and deserves great attention

5 Improve logistics through smarter regulations

- Loading, cabotage, multi-modality
- Better information of shippers to foster virtuous practices
- Freight growth is much faster than people's mobility

6 Develop policies around ITS, vehicle pooling/sharing and seamless multi-modality

- Aimed at optimizing vehicle use, reducing emissions (GHG and pollutants), congestion and use of public space
- Digital tools will be highly instrumental in transforming mobility, but smart associated fiscal tools will ensure public acceptance of new regulations.

7 Incentivize R&D in new technologies and services

- Favour solutions integrating "climate adaptation" criteria
- A huge effort to optimize state-of-the-art solutions is still necessary, in terms of both mitigation and adaptation. The private sector will have to be helped.

8 Favour joint decentralization of energy and mobility systems

Decentralized energy generation for mobility (clean electricity and hydrogen, bio-methane, electro-fuels, etc.) becomes a must and must be encouraged through both public and private interests. New mobility solutions must be designed in harmony with these local energy paradigms.

9 Develop public-private partnerships to finance new infrastructure

As states and cities are, in their vast majority, greatly indebted, financing new infrastructure for public benefit and mass transit requires new partnership schemes and regulations.

10 Anticipate roadblocks

Careful attention should be put on acceptance by political elites, public communication, social acceptance and transformations in certain conventional sectors, public engagement, social inclusion and universal access to decarbonised solutions, in order to prepare relevant policy packages, to overcome these anticipated roadblocks.

These 10 chapters of specific policy action in the transport sector must be supported by five major policy plans of action which have a broader scope, and which might deserve being briefly explained in a training program:

1. Fiscal transformation aiming at severing taxes on environmental externalities and alleviating them on other sectors (e.g. labour). In several countries VAT and Transport are the most used tools. GHG and Carbon pricing are not the panacea and other valuation tools of GHG are to be developed and carefully addressed to the public engagement
2. De-risking long-term investment in low-GHG technologies and promoting a pro-business climate to innovate in new services and solutions
3. Initiating academic curricula on sustainable development, including sustainable mobility
4. Fostering energy mix transformation
5. Fostering universal access to user-friendly IT services

Case studies

It is proposed to start with the case study of France which, after ratifying the Paris agreement, developed a Climate Action Plan (July 2017) to decarbonize by 2050, then launched a nationwide 3-month caucus on how to proceed (*Assises de la Mobilité*, September/December 2017) and just concluded its parliamentary work on a "Mobility Orientation Law". This process is complemented by a National Low Carbon Strategy & an Energy Plan developed at government level, mirrored at company level by a study, to be released on May 20th, on how to effectively decarbonize the French economy by 2050.

This case study would be enriched by focused input from all other TDA country members.

Major references

- PPMC (2017) "A Global Macro Roadmap Outlining an Actionable Vision towards Decarbonized, Resilient Transport - Implementing the Paris Agreement on Climate Change in the transport sector in support of a net-zero EMISSION, climate-resilient economy by 2050 or shortly thereafter", <http://www.ppmc-transport.org/wp-content/uploads/2016/04/GMR2017.pdf>
- TDA (2018) "Decarbonising Transport by 2050 - A TDA manifesto on how to reach net zero emission mobility through uniting Countries, Cities / Regions and Companies", http://tda-mobility.org/wp-content/uploads/2018/12/EY_TDA-Manifesto.pdf
- TDA (2019) "Zero Emission Urban Freight - A TDA whitepaper on how to reach zero emission urban freight by uniting Countries, Cities/Regions and Companies", <http://tda-mobility.org/wp-content/uploads/2019/05/TDA-Zero-Emission-Urban-Freight.pdf>
- UNFCCC (2018) United Nations Framework Convention on Climate Change 2018 Annual Report, <https://unfccc.int/sites/default/files/resource/UN-Climate-Change-Annual-Report-2018.pdf>
- UN WCED (1987) "Brundtland Report - Report of the World Commission on Environment and Development: Our Common Future", UN, NY <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>