

Introduction

Situation of cycling in Poland improves rapidly over the last decade nevertheless there is a lot more to be done both in terms of the safety issues to be solved immediately as well as a more strategic approach. The bicycle as a mode of transport is being mentioned in all levels of law: local, regional and national, but with few exceptions are highly strategic mentions. One of such exceptions is the "Manual for the organization of safe cycling" issued by the Institute for Car Transport (sic!) and endorsed by the Ministry of Infrastructure. This document outlines not only the infrastructure standards for cycling but also the methods and procedures for ensuring cycling safety. National and international law regulations are also summarised. The manual is not highly viewed by the cycling community. What is pointed out there are better examples at the local level which are not taken into account by lawmakers. Also, the mindset of this standard is viewed as highly conservative and adapted to car transport. What was pointed out by the stakeholders on numerous occasions is that despite political declarations ranging from "low carbon transport" to "enhancing liveability of the cities" to "ensuring the safety of cyclists and pedestrians" the political will to redistribute the urban space from car users to cyclists is low and the only attempts are done by these road authorities or city councils who are aware of the cyclists' needs (being cyclists themselves in most cases) and acknowledging the importance of the transport revolution we need to make in order to tackle climate change and adapt to its effects but also in order to improve air quality.

The state of sustainable mobility in Poland is not uniform. Big cities such as Warsaw excel having very well organized and reliable public transport, city bicycle sharing system, and consequent political will followed by the tasks and the budget to enhance cycling and public transport as a system. Not only the metropolitan area shines on the chart of the most successful cities in terms of cycling. Lublin which is one-eighth the size of Warsaw has a very good development strategy in terms of cycling, often being the early adopter of modern solutions. Warszawa, Katowice, Szczecin, Wrocław and Lublin are also the leaders in terms of cycling infrastructure being built. Szczecin and Wrocław have also developed excellent cycling development standards that are regarded by the stakeholders as a key to proper cycling law in Poland. Bydgoszcz and Warszawa are the safest cycling cities with less than 6 and less than 8 casualties of cycling accidents respectively per hundred thousand inhabitants with numbers steadily falling year to year (with Krakow's over 30 casualties). Bicycle sharing systems are being popular in Poland with Warsaw having the biggest density of sharing stations per square kilometer and the cheapest price per hour of the ride (with nice integration into public transport tariff scheme). On the other hand, Tri-City was partially unsuccessful in implementing the bike-sharing system and during the writing of this report the MEVO bike-sharing system is being reorganized with hopes of reintroduction under new management in the next season.

A slightly different situation is observed in small and medium-sized cities even in satellite cities of Warsaw. The division of competences regarding road authority between state (national highways), region (voivodeship), county (powiat) and municipalities are often a block in maintenance and modernization of the roads and in development of the cycling infrastructure. In most cases, the decisions on infrastructure reflect different strategic goals without lower administration levels being present or even heard. The task and budget flow are often blocked by this division. In effect there is often a situation that county or municipality cannot repair extremely damaged road, which is dangerous even to car users not to mention cyclists because higher-level owner does not have a budget assigned to this task and when local budget is available (these resources are mobilized in extremely dangerous situations) there is decision paralysis. This situation persists especially in rural areas to the extent when people are forced to buy two cars in order to have a mean of transport when (not if) one is damaged due to poor road quality. The

public transport is practically not existent. The biking is in use as a mean of transport on these dangerous roads in many cases by elderly people (not being able to afford another mean of transport).

The other infrastructural problem both in terms of road infrastructure and in terms of intermodal hubs is land ownership. Complicated land ownership patterns make the necessary investments multi-stakeholder and lengthy projects at the start and often not possible to negotiate.

The other important factor is the increase in car use. A car is still widely perceived as a status item even though the purchase and maintenance of it is often the biggest expense in a typical polish family budget. The car market growth is also fuelled by the social programs of the present government. Unfortunately, consumer choices are focused on used cars. The larger number of cars the biggest pressure on building car infrastructure and lower road safety (note the main share in the market are used, and not very modern cars). There is also social acceptance for modification of the exhaust system (i.e. removal of the filters). This is one of the sources of poor air quality, especially in cities. The second one is heating. There are programs to enhance the air quality, with funding available also from the European Union and the World Bank (both mainly focused on modernization of heating systems) but the number of implemented projects not even nears 10% out of 400000 described as a minimum needed to improve the situation. The air quality norms are also very permissive. In this context the cycling as a mode of transport is often viewed as the greatest solution allowing to lower the pollution from transport – at the same time not taking into account the health and safety risks associated with cycling in such a low air quality.

Based on the discussion of the situation in Poland the following recommendations were proposed:

National Policy Recommendations Poland

Policy coherence (all levels)

Currently the situation of cycling is described in numerous acts of law (ranging from national to local) which in many cases can be contradictory in practical implementation. In numerous situations greater safety measures are not introduced because of prioritization of the flow of car traffic. Good practice do exist in design of law but on different levels the law is not harmonised. There is also lack of coherence between different bills dealing with similar problems but from the perspective of different ministries.

In order to achieve the coherent law several steps are needed. First step is the review of existing law with focus on prioritizing pedestrians, cyclists and public transport. There is also an urgent need to enable redistribution of urban space. The research and experiments conducted during the duration of Cycle Urban showed that there is – to a large extent – tendency to maintain status quo in terms of motorized traffic, while pedestrians and cyclists are an addition. This is contradictory to what is foreseen in strategic documents and in the law itself. Second step is the harmonization of the acts of law in terms of fostering green urban transport and prioritizing pedestrians, cyclists, and public transport. These priorities should be introduced as mandatory in newly created acts of law.

Parliamentary bike-users group (national level)

The advisory committee working within the structures of parliament proved successful in advising the lawmakers in many cases on critical bills. In numerous cases poor quality

solutions were identified and fixed or counter intuitive effects explained. Parliamentary bike users group was not only part of political landscape of the Polish Parliament but shaped the conditions that allowed rapid development of biking as a transport mode. Yet there is a lot to be done. Currently no such group exists despite strong representation of other “user groups” in parliament thus limiting the chances of balancing the strong influence of other road users.

The consultation with stakeholders both during the BYPAD process and during project workshops showed urgent need to re-activation of the Parliamentary Bike-Users Group with active role to law-making processes.

Task and budget shift down in the administrative level (all levels)

Current state of competence and responsibility in infrastructure construction and maintenance is being solved in two ways: either the tasks are pushed down the administrative levels towards municipalities but without needed budget assignments or the higher administrative level “owns” infrastructure on the territory of the lower administrative level resulting in mismatch in construction standards and modernization/maintenance schedule, needs of local community being ignored or not being met. However there are municipalities who have the needed budget to modernise the higher level roads themselves but this is perceived as being a damage to local budget.

Shifts in responsibilities should be made easy: if the municipality needs to modernise the road not within its’ competences the one time modernisation or transfer of ownership should be made easy. Coordination of tasks should be introduced at Voivodeship level. Transfer of budget for the tasks shifted down in territorial administration should follow.

Ad-hoc shifts in responsibilities or assignment of tasks should be linked with shifts in budget or deemed unsuccessful and unbinding.

Importance to enforce the laws on air quality and road safety (local)

The huge gap between knowing about air quality/road safety and its’ influence on public health and acting actively in this field is identified. Both problems affect directly and indirectly cyclists. These two important topics are treated lightly and the law is not enforced or enforced to the smallest possible extent. There are also no incentives to change the situation where it is bad.

Proper implementation of the law and law enforcement regarding road safety and air quality is needed. Currently, despite bad air quality not enough funds were spent on removing pollution sources. Governmental programs and EU programs were not implemented to full extent.

Sampling air quality from heating systems should be put in the context of science and create solid base for law enforcement.

Road safety should be treated as a priority. The law enforcement on safety should focus on motorized traffic rather than pedestrians and cyclists. Current situation to large extent “favourises” motorized traffic with low fines.

Introduction of national biking standards based on good practice of polish cities (all levels)

The standards of cycling infrastructure are not yet implemented country wide. Different cities develop standards at their own pace and using different levels of expertise. Resulting standards are not promoting best practice. Existing standards are either copied one to one without adaptation to local and regional context. In many cases cities develop standards from scratch while good practice examples exists and are ready to adopt. Also worth noting

is the fact that numerous cities have good cycling standards which are either copied without the much needed adaptation to local context or are being constructed from scratch, often leading to a situation when the same “bad” solution is being discovered independently, while more experienced cities already overcame the shortcomings.

National best practice examples should form national biking standards for cities starting in sustainable active mobility to adopt. While this affects all planning levels this should be done using bottom up approach, sharing the know-how rather than by the creation of national law.

Standardization is also important in the next identified recommendation – the quality assurance.

Quality assurance in the infrastructure being built (local and regional)

The standards of cycling infrastructure are not yet implemented country wide. The municipalities often build cycling infrastructure using bad examples or “typical solutions” multiplying these shortcomings. The quality of the infrastructure is often poor and the quality assurance processes weak. It is often the case that cycling infrastructure designed with the standard for “light vehicles” is often used by heavy vehicles (as often seen in many cities urban greenery department heavy vehicles use cycling roads).

National best practice examples should form national biking standards, available for cities starting in sustainable active mobility to adopt. While this affects all planning levels this should be done using bottom up approach, sharing the know-how rather than by the creation of national law.

Introduction of compulsory quality assurance process of cycling infrastructure using participatory approach. Members of cycling community should be present during quality checks of new or modernised infrastructure. In the future it should lead to the development of standards of building, maintenance and exploitation of cycling infrastructure.

Coherence in the infrastructure being built or modernised (local and regional)

There are different actors present at any given municipality. There are four main owners of the roads: country, voivodeship, county, municipality. These actors have different goals, standards, budgets and construction timelines. This situation results in incoherent infrastructure for any road users especially cyclists. Such discrepancies produce another problem – the needs of local community are often not being met or fully met in infrastructure constructed or maintained by higher hierarchy levels.

Stakeholders proposed a mandatory harmonization of the infrastructure standards, schedules and budgets. Adoption of good practice country-wide. Introduction of coherent, participatory and multi-level planning and execution process resulting in seamless infrastructure possibly through introduction of regional infrastructure coordinators. It is worth noting that the planning process was previously organised by land use plans and additional documents. The process was mostly seamless and ensured the national strategies are being implemented or have the resources secured at local level. This is not the case anymore and spatial chaos is visible.

Eliminating the conflicts between pedestrians and bikers

With growth in cycling infrastructure and popularization of cycling as a transport mean new area of conflicts was created. Shared spaces especially with intensive streams of pedestrians and bikers crossing are perceived as less safe by both groups.

During the Cycle Urban Project an experiment was undertaken which identified best practice: Clear identification of conflict areas between cyclists and pedestrians helps both groups resulting in greater safety (both perceived and measured). Participatory approach to design and implementation of the solutions is vital.

The best practice were identified: 1. Marking the whole conflict area checkered with red lateral marks making both users groups aware of the potential conflicts.

2. In high speed cycling traffic roads a narrowing of the road before potential conflict area. Preferable with lateral marks and greenery rather than solid construction type.

Both solutions were introduced in identified test areas and the results were confirmed by observation as well as survey. These solutions are proposed to be implemented as a standard for such spaces.

Transparency, information, and education of stakeholders on infrastructure development process and intervention possibilities. Closest cooperation in public participation processes

The participatory processes in infrastructure development need further refinement. Current public participation processes work and bring good results however, project workshops showed that cyclists/infrastructure users do not fully understand the complexity of the investment process. This situation results in unrealistic expectations of the cycling community and infrastructure investors are defensive from the start which does not often result in optimal dialogue. Stakeholders believe that clearer picture of interconnections between agencies dealing with roads and transport, and interconnections of law and processes governing the infrastructure development or modernisation are key in terms of future, successful and meaningful participatory process.

Investment process should be made as transparent as possible with key intervention points being set and made clear for the stakeholders. All the stakeholders and law frameworks should be clearly identified during participatory process which would bring greater understanding in the user groups and in this way benefit the whole process by better addressing the needs of these groups.

Obligatory establishment of infrastructure for cyclists in newly built and modernised residential buildings/areas

With more and more of urban sprawl observed and new buildings being developed without other principles than profit of the developer, the quality of life in new districts diminishes. Often the new residential areas are accessible only by car with lack of pedestrian/cycling infrastructure or accompanying services triggering commuting/transport needs.

The solution is believed to lie in two areas: the national law which should make infrastructure design obligations clear and compulsory and the design process of the districts itself – in the creative environment of architects and urbanists.

Development of design standards (or rediscovery and modernisation of standards existing in the 60' and 70'). In Poland strategic planning of communities, districts and cities was a paramount in the past. This often was overused to the extent of social engineering with catastrophic results. Thus since the 90' total regress of such standards is being observed.

Solutions that should be introduced by law as well as by design standards are as follows. Mandatory inclusion of pedestrian and cycling infrastructure as well as services and trade areas per given number of inhabitants. Mandatory introduction of pedestrian/cycling infrastructure in modernised areas.

Compulsory education on using the roads as common shared space

With law-enforcement focused on penalizing pedestrians and cyclists education on road safety focuses on being pedestrian only. This generates a conflict from the start. Limited education on cycling exist. While education of car drivers focuses on passing the licence exams rather than being road user. Education of pedestrians focuses on dangers when using the road or shared space which of course is direct and intuitive product of road safety discussion while it would be most needed to reshape the program towards understanding each road user.

Introduction of mandatory workshops on all education levels focused on inclusive or gentle mobility. Education on correct behaviours while being in different role as a road user: pedestrian, cyclist, car driver. This is more important with the introduction of car sharing systems which created group of occasional car drivers, and the introduction of bike sharing systems created occasional bikers.

Table No. 1: National Policy Recommendations

Priority Topic	No.	Recommendation	Status Quo Description	Proposed Policy Change Description	Date for Implementation	Affected Stakeholder (s)	Final Recipient (s)
Legislative Changes	1	<p>Urgent introduction of policy coherence evaluation on all administrative levels</p> <p>Key words: policy coherence, law-making</p>	Currently the situation of cycling is described in numerous acts of law (ranging from national to local) which in many cases can be contradictory. In numerous situations greater safety measures are not introduced because of prioritizing the flow of car traffic	First step is the review of existing law with focus on prioritizing pedestrians, cyclists and public transport. Harmonization of the acts of law. Mandatory introduction of above mentioned priorities in newly created acts of law.	2023	Lawmakers on all administrative levels; Ministries competent in: transport, building and infrastructure, environment, internal affairs, Marshalls of Voivodeships, Cities and city/district councils	Chancellor's office of Lower House of Parliament
	2	<p>Parliamentary Bike-Users Group</p> <p>Key words: policy-making, law-making</p>	Former advisory committee working within the structures of parliament proved successful in advising the lawmakers. Currently no such group exists despite strong representation of other "user groups" in parliament.	Re-activation of the Parliamentary Bike-Users Group with active role to law-making processes.	2020	Members of parliament	Chancellor's office of Lower House of Parliament
	3	<p>Task and budget shift down in the administrative level (all levels)</p> <p>Key words: policy-making, budgeting, infrastructure, competences of actors</p>	Current state of competence and responsibility in infrastructure construction and maintenance is being solved in two ways: either the tasks are pushed down the administrative levels towards municipalities but without needed budget assignments or the higher administrative level "owns"	Shifts in responsibilities should be made easy: if the municipality needs to modernise the road not within its' competences the one time modernisation or transfer of ownership should be made easy. Shifts in responsibilities or assignment of tasks should be linked with shifts in budget or deemed unsuccessful and unbinding.	2021	Ministries competent in: Transport, Infrastructure, Internal Affairs; Voivodeships; Counties; Municipalities	Chancellor's office of Lower House of Parliament; Voivodeships; Counties; Municipalities

		infrastructure on the territory of the lower administrative level resulting in mismatch in construction standards and modernization/maintenance schedule, needs of local community being ignored or not being met.				
4	<p>Importance to enforce the laws on air quality and road safety (local)</p> <p>Key words: law enforcement</p>	These two important topics are treated lightly and the law is not enforced or enforced to the smallest possible extent.	<p>Proper implementation of the law and law enforcement regarding road safety and air quality is needed.</p> <p>Sampling air quality from heating systems should be put in the context of science and create solid base for law enforcement. Road safety should be treated as a priority. The law enforcement on safety should focus on motorised traffic rather than pedestrians and cyclists.</p>	2020	<p>Ministries competent in: transport, internal affairs, climate; Marshalls of Voivodeship, Counties, Municipalities.</p>	<p>Ministries competent in: transport, internal affairs, climate; Marshalls of Voivodeships</p>
5	<p>Quality assurance in the infrastructure being built (local and regional)</p> <p>Key words: standards, quality of infrastructure, investment process</p>	<p>The standards of cycling infrastructure are not yet implemented country wide. The municipalities build cycling infrastructure using bad examples or “typical solutions” multiplying these shortcomings. The quality of the infrastructure is often poor and the quality assurance processes virtually non-existent. It is often the case that cycling infrastructure designed with the standard for “light vehicles” is often used by heavy vehicles (as often seen in many cities urban greenery department heavy vehicles use cycling roads).</p>	Introduction of compulsory quality assurance process of cycling infrastructure using participatory approach (members of cycling community present during quality checks of new infrastructure).	2021	<p>Marshalls of Voivodeships, County Boards, Presidents and Mayors</p>	<p>Marshalls of Voivodeships</p>
6	<p>Coherence in the infrastructure being</p>	There are different actors present at any given municipality. There are four	Mandatory harmonization of the infrastructure standards, schedules and budgets. Adoption	2023	<p>Ministries competent in: transport,</p>	<p>Ministries competent in: transport,</p>

		built or modernised (local and regional)	main owners of the roads: country, voivodeship, county, municipality. These actors have different goals, standards, budgets and construction timelines. This situation results in incoherent infrastructure for any road users especially cyclists.	of good practice. Introduction of coherent, participatory and multi-level planning and execution process resulting in seamless infrastructure possibly through introduction of regional infrastructure coordinators.		infrastructure; Marshalls of Voivodeships, County Boards, Presidents and Mayors	infrastructure ; Marshalls of Voivodeships,
Capacity Building	7	Introduction of national biking standards based on good practice of polish cities (all levels)	Different cities develop standards at their own pace and using different levels of expertise. Resulting standards are not promoting best practice. Existing standards are either copied one to one without adaptation to local and regional context. In many cases cities develop standards from scratch while good practice examples exist and are ready to adopt.	National best practice examples should form national biking standards for cities starting in sustainable active mobility to adopt. While this affects all planning levels this should be done using bottom up approach, sharing the know-how rather than by the creation of national law.	2022	Ministries competent in: transport, infrastructure; Marshalls of Voivodeships, County Boards, Presidents and Mayors	Ministries competent in: transport, infrastructure ; Marshalls of Voivodeships,
	8	Transparency, information, and education of stakeholders on infrastructure development process and intervention possibilities. Closest cooperation in public participation processes	Current public participation processes work and bring good results however, project workshops showed that cyclists/infrastructure users do not fully understand the complexity of the investment process. This situation results in unrealistic expectations of the cycling community and infrastructure investors are defensive from the start which does not often result in optimal dialogue.	Investment process should be made as transparent as possible with key intervention points being set and made clear for the stakeholders. All the stakeholders and law frameworks should be clearly identified during participatory process which would bring greater understanding in the user groups and in this way benefit the whole process by better addressing the needs of these groups.	2021	City/municipality authorities competent in road construction and maintenance; Ministries competent in: transport, infrastructure, and internal affairs	Mayors, Presidents of the cities
	9	Eliminating the conflicts between pedestrians and bikers	With growth in cycling infrastructure and popularization of cycling as a transport mean new area	During the Cycleurban Project an experiment was undertaken which identified best practice:	2020	City/municipality authorities competent in road construction	Ministries competent in: transport, infrastructure

			of conflicts was created. Shared spaces especially with intensive streams of pedestrians and bikers crossing are perceived as less safe.	Clear identification of conflict areas between cyclists and pedestrians. Participatory approach to design and implementation of the solutions. The best practice were identified: 1. Marking the whole conflict area checkered with red lateral marks making both users groups aware of the potential conflicts. 2. In high speed cycling traffic roads a narrowing of the road before potential conflict area. Preferable with lateral marks and greenery rather than solid construction type.		and maintenance; Ministries competent in: transport, infrastructure, and internal affairs	, and internal affairs
	10	Obligatory establishment of infrastructure for cyclists in newly built and modernised residential buildings/areas	With more and more of urban sprawl observed and new buildings being developed without other principles than profit of the developer the quality of life in new districts diminishes. Often the new residential areas are accessible only by car with lack of pedestrian/cycling infrastructure or accompanying services triggering commuting/transport needs.	Development of design standards (or rediscovery and modernisation of standards existing in the 60' and 70'). Mandatory inclusion of pedestrian and cycling infrastructure as well as services and trade areas per given number of inhabitants. Mandatory introduction of pedestrian/cycling infrastructure in modernised areas.	2021	City/municipality authorities competent in building authorization; Architects	Architects associations
Education and Raising Awareness	11	Compulsory education on using the roads as common shared space	With law-enforcement focused on penalizing pedestrians and cyclists education on road safety focuses on being pedestrian only. This generates a conflict from the start. Limited education on cycling exist. While education of car drivers focuses on passing the licence exams rather than being road user.	Introduction of mandatory workshops on all education levels focused on inclusive or gentle mobility. Education on correct behaviours while being in different role as a road user: pedestrian, cyclist, car driver.	2021	Ministries competent in: transport, education, The police	Ministries competent in: transport, education, The police head quarters

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Source: Field research conducted during project Cycleurban, Stakeholder meetings, BYPAD Audit process for Warsaw, Warsaw Road Authority, Experiment of Warsaw Road Authority,

Author: