

Policy Paper

"What should be public policy on road safety in Ukraine?"

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Abbreviations:

RS - road safety

TA - traffic accident

SCS - State Construction Standards

SSU - State Standards of Ukraine

TR - traffic rules

CUAO - Code of Ukraine on Administrative Offenses

MIA - Ministry of Internal Affairs of Ukraine

NP - National Police of Ukraine

SAI - State Automobile Inspectorate

EU - European Union

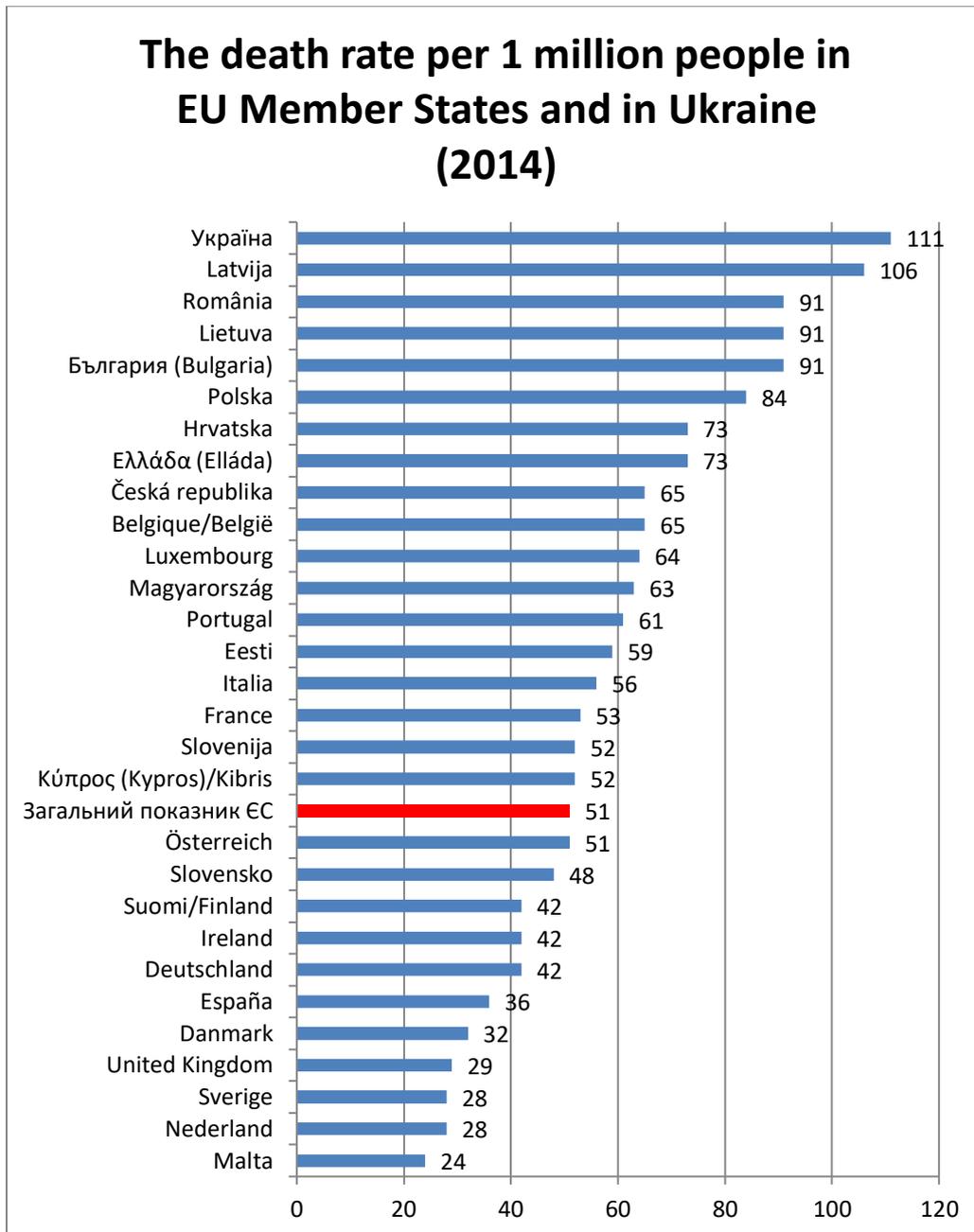
USA - United States of America

1. Issue description: scale, relevance

The issue of road safety is specific enough. It is really comprehensive in terms of the risks and interpretation. Any road use in any role - that of a pedestrian, driver, passenger, cyclist - implies a high risk of injury or loss of life. Ukrainians fear roads.

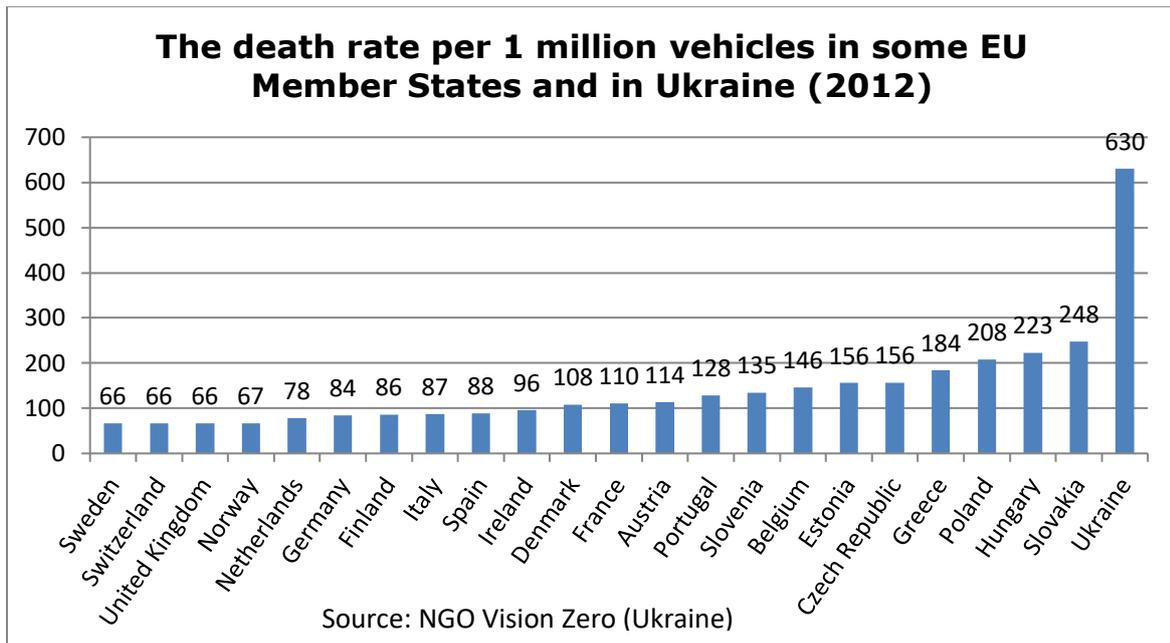
Among European countries, Ukraine demonstrates one of the lowest road safety levels. This level is measured with the extent of the consequences incurred, above all - with the number of lives lost. Ratios are often used for comparison - mortality vs the population number and mortality vs the number of registered vehicles.

Figure 1 - The death rate per 1 million people in EU Member States and in Ukraine (2014)



As seen in the chart, Ukraine is far behind its western neighbors. The mortality rate per 1 million population has been around 110-115 for several years, although in the worst years (2007) it reached 206 deaths per 1 million population. While the average indicator among the 27 EU Member States as of 2015 was 62 deaths per 1 million population, and the leading countries' indicator is less than 30.

Figure 2 - The death rate per 1 million vehicles in some EU Member States and in Ukraine (2012)



Traffic risks in Ukraine are actually even higher, since one should take into account the much lower rate of car ownership than in neighboring countries. Countries having more extensive road networks where there are more cars have a higher statistical probability of accidents, deaths, and injuries (with other conditions being equal). Our country, according to the author and based on data of the State Statistics Service of Ukraine, has about 120 units of motor vehicles per thousand people, while in the EU the figure is 200 (East) up to 400-500 (West and North).

If we look at this indicator - the mortality rate per 1 million cars - in Ukraine it is more than 600, while for our immediate neighbors in the West - it is approx. 200-250, and in "champion" EU Member States - 66. The difference vs Ukraine is ten-fold.

Relevance of the issue

The problem of traffic accidents and deaths on the roads of Ukraine is relevant for two reasons.

Reason 1: poor road safety results in terrible consequences. This is a large number of dead and injured men, women, and children - at least 20,000 victims annually (the injured and dead cumulatively). These deaths result in tremendous physical and mental suffering for the society, economic losses (workable age population gets injured and dies in TAs). There is also the direct monetary price paid by society for its failing to deal with the issue of traffic accidents. These are the costs of rescuing and treating victims of accidents, registration of TAs, transportation of smashed cars, repair of damaged road infrastructure. It is also

about paying inoperability and disability pensions, insurance coverage, etc. According to the World Bank, economic losses of Ukraine resulting from traffic accidents reach 1.5% of GDP, i.e. more than 1 billion US dollars.

Reason 2: the effects described ARE NOT inevitable. Evidence proves that 95% of accidents can be prevented. Almost all traffic accident are not natural disasters or force major episodes - they are subject to scientific analysis that can reliably identify the causes, factors, and circumstances of both every individual case (micro level analysis), and of large numbers of such accidents in, say, a city, region, or in a country (macro level analysis). Based on the analysis, selecting efficient and effective public policy instruments makes it possible to successfully prevent a large part of accidents, and where they cannot be prevented - to significantly mitigate their consequences.

Thus, we come to a deeper level issue, which, in fact, this document is focused on. This is not about the general problem of accidents on roads, which is, in fact, clear, this is about **lack of an adequate public policy on road safety**. "Adequate" in English means "minimally required", while Ukraine currently has no minimally required public policy that would control the problem of deaths on roads and start improving the situation.

Hereinafter, concrete evidence of weakness of the current public policy and possible ways to improve the situation are suggested.

2. Why is the current policy not satisfactory?

The public policy of Ukraine as it is now should be seen as unsatisfactory for the three fundamental reasons that will be explained below:

Reason 1: The state poorly performs its commitments to the society in the area of road safety, in particular in ensuring safety of roads, safe vehicles, and safe road user behavior, as well as emergency medical care provision.

Reason 2: The state has not set up a management, enforcement, and control system that would include institutional responsibilities and coordination of activities of various authorities.

Reason 3: The state has no clear goals or strategy for action in the field of traffic safety, or a system to monitor progress and assess effectiveness of specific activities or policies.

Reason 1. Poor performance by the state of its obligations to the society

Road safety problem cannot be resolved at the private level or at the level of local government. Thus, the society commissioned it to the state, giving it the power and resources and having expressed consent to adhere to rules and regulations developed by the state. The state, in response, has undertaken a number of commitments to the society as a whole and each citizen in particular.

But is it successfully complying with them?

FIGURE 3: Deaths in road accidents in Ukraine per 1 million population in 1995-2014



The chart above shows the road safety status over the past 20 years. First, it shows absolutely no long-term trend towards improvement, which can be seen on similar charts from any EU Member State and the EU as a whole.

Second, the changes in road safety coincide with changes in the economy. The number of accidents and deaths on the roads of Ukraine shows a clear correlation with the economic situation in the country: the gradual growth in 2001-2005 peaking in 2006-2007, followed by a sharp drop in 2008-2010, and finally, new growth since 2011. For comparison, we could address the situation in any neighboring country that is now an EU Member State - Romania, Slovakia, Poland. There are also economic cycles, but in the long-term perspective the mortality curve goes down (see the annex).

So, with a high degree of confidence it can be argued that "improvement" of safety of roads in Ukraine in 2013-2015 is temporary,

and it is due to economic problems and low purchasing power of the population. Once economic growth restarts and mass consumer loans are restored, road safety will sharply deteriorate again.

Two findings disappointing for a Ukrainian policy or public manager follow.

Finding 1: The Ukrainian state, with all of its numerous regulatory legal acts and institutions, produces no systemic effects on road safety. In fact, road safety in our country is managed not by the state apparatus, but by macroeconomic processes not dependent on it, and impoverishment of the population is the best "improver" of the situation on the roads.

Finding 2: If there is no change in the public policy regarding road safety right now, unless we build an effective road safety management system, then along with the further economic recovery, which will come sooner or later, traffic safety on the roads will once again deteriorate sharply, perhaps even down to the catastrophic scale of 2003-2008.

Hereinafter, we assess Ukraine's execution of its commitments to the community in the area of road safety, and for our convenience we highlight the four components of the road safety system. Let's consider the commitments taken by the state of Ukraine to its citizens in each of the sectors and how well it is performing them.

These components of the system are:

1. Safe roads.
2. Safe road users.
3. Safe vehicles.
4. Providing emergency medical care, after a TA has already happened.

Safe roads

Trying to ensure that the roads and streets of Ukraine are safe, the government has built up a complex system. This system consists of numerous binding documents: procedures, rules, regulations, and standards for construction, repair, and reconstruction of the street and road infrastructure, as well as for traffic management (marking, signs, traffic lights, and so on) on it. Besides, governmental agencies and organizations have numerous powers enshrined in

law to monitor compliance with these standards through approval, inspection, and investigation procedures.

The state does not properly fulfill its obligation for safe infrastructure.

Standards and construction norms are often outdated, they do not meet current EU practices and do not contribute to the maximum safety level.

Some facts to prove this statement:

1. **Small diameter loop intersections** (up to 50 meters) are virtually absent from Ukraine, and their construction in cities is still not permitted under applicable building codes. In the European Union, this intersection layout has been applied since 1980 and has proved an unprecedented success in improving safety, forcing reduced speed of crossroad passage, and reducing to zero the most dangerous TA scenarios - frontal and side collision (Brilon, 2011). Small loop intersections is an internationally recognized best practice, and countries in the east of the European Union are actively constructing small radius loops.
2. Even **new roads are** dangerous. For example, in cities and on highways of Ukraine, it is common to organize unregulated crossings without safety islands on 4-lane roads. This is a very bad technical solution in terms of safety, which leads to significant accident and mortality rates (TEN-T, p.10).
3. In Ukraine, **there is no procedure for auditing safety of road infrastructure at the design, construction, and post-construction phases**, which is a safety must under European Union standards (EU Directive 2008/96/EC). Ukrainian engineers design roads and streets that motivate for high speed and are not safe enough for pedestrians, and as a result - the widely spread "TA concentration spots". And there is no authority that would assess these designs for safety and point to the mistakes that should be eliminated.
4. **The width of lanes in settlements of Ukraine is often excessive** and is 4 meters or more, which leads to high speed of driving, which in turn is a critical safety factor in the situation where run over pedestrians is possible. For comparison, the width of the lane on a German autobahn, where there is no speed limit, is 3.50 m, and of the right lane - 3.75 m, because it is intended for movement of large vehicles.

These standards and unjustified practices in road infrastructure result in the phenomenon where **repair or construction of roads result not in safety**

improvement, but rather in deterioration. Examples are the best surface quality roads in the country that are the worst in terms of safety.

Table 1. Key Ukrainian roads, despite the repair, do not demonstrate improved safety

International road	Indicator	2009	2010	2011	2012	2013
M-03 Kyiv - Kharkiv - Dovzhansky (in Rostov-on-Don)	killed	135	121	145	152	141
	injured	607	646	733	833	681
M-05 Kyiv - Odessa	killed	102	104	102	116	96
	injured	370	365	360	369	319
M-06 Kyiv - Chop (to Budapest via Lviv, Mukacheve, Uzhgorod)	killed	179	164	198	196	203
	injured	735	631	669	688	603

Source: the National Police

The problem is that the roads are built or repaired under outdated standards (SCS) or even without complying with their requirements, and the designers see traffic speed as a priority, not safety of users. Moreover, the roads are not equipped with safety infrastructure means - barriers between traffic flows, longitudinal noise lanes, etc. As a result, M-06, which many believe is a model one for Ukraine is, in fact, the poorest one in terms of safety - over 200 people lose their lives on it annually - on average, that's one life per 4 km of the road.

Safe road users

The concept of "road users" includes not only drivers, but also cyclists, scooter drivers, pedestrians, wheelchair users, passengers of private and public transport.

The degree of safety of road users' behavior in Ukraine is low. This is obvious for any individual taking part in traffic and seeing the number of TR violations by other traffic participants. It is also evidenced by official statistics, according to which almost all reported TAs happen because of a failure to comply with traffic rules.

According to statistics in 2009, about 95% of TAs and 81% of deaths were exactly the fault of drivers, 38% of those TAs occurred due to speeding. According to the National Police, out of more than 25,000 accidents with victims

registered in 2015, 21,000 occurred due to violation of traffic rules by traffic members, and they led to 83% of all deaths.

Road users, especially drivers, systematically violate safety rules that are directly connected to the probability and severity of consequences of TAs. For example, field research held by "Vision Zero" organization in 2016 in Ivano-Frankivsk showed that 85% of drivers did not use seat belts. Measurements of the traffic speed in 5 mainline streets of the city showed that 75% of drivers move at a speed exceeding the statutory 60 km/h.

In order to ensure that road users behave safely, the government established unified traffic rules (approved by the Cabinet of Ministers of Ukraine) and developed a system to impact those citizens by means of:

1. Formal education - teaching safe travel at schools and driving schools, advanced training of drivers, and so on.
2. Informal education (instruction) - holding public awareness and outreach activities.
3. Imposition of sanctions for failure to comply with the rules of safe behavior on the road.

Driver training system in Ukraine does not offer many of the skills and knowledge that are directly related to safety on the road.

Let's consider in more detail the problems that Ukraine has in each of the fields and that prove weakness or ineffectiveness of the public policy.

Training

The level of driver training in Ukraine is low. The EU TEN-T Project in its report stated that the system of training and the issuance of driver's licenses in Ukraine is ineffective and prone to corruption at all levels (Article 9). A known fact in Ukraine is that **a significant proportion of driving licenses were until recently obtained through or with the assistance of acts of corruption (bribery).**

Even if we leave corruption aside hoping that it will be overcome with the reforms ongoing in the Interior Ministry, the **standards and practices of driver training in Ukraine as such are outdated and ineffective** in terms of reducing the risk of TAs.

According to the National Police, "young" drivers with experience of less than 2 years, the number of which is about 5% of all, were responsible for 22% of the TAs that happened because of the drivers' fault. These accidents resulted in 15% of all fatalities in this year, and in 22.7% of all traumas (TEN-T Report).

At an average driving school, the driver to be hears a lot of theoretical information about the mechanical structure of vehicles, but does not get many of the skills that are required for him/her to be a safe road user. For example, these include the skills to determine safe distances, safe braking skills, the skills of driving in the proximity of cyclists.

At the same time, **many of the skills and knowledge conveyed by trainers of driving schools, by contrast, are harmful in terms of safety** - for example, when the instructor teaches releasing the clutch pedal before pressing the brake pedal.

And this **low level of competence of lots of the trainers** can be explained, because these people do not undergo any special training, certification, or advanced training. In Ukraine there are no tested and approved training programs for driving skill instructors, and absolutely no certified or accredited education facilities that would train such specialists.

Penalties for traffic rule violations

Any social rules become meaningless if there is no system to monitor compliance with them and punish perpetrators. This is directly related to the area of traffic rules - all the countries that have achieved notable successes in this area have efficient law enforcement systems, which usually consist of successful police work and technology solutions, such as stationary and mobile cameras monitoring the traffic. The system to monitor traffic that existed until recently was notorious for the reason of corruption. Corruption was largely resolved with liquidation of the traffic police and introduction of the new Patrol Police, but this positive change, unfortunately, has not led to improvements in the field of road safety. At least, accident statistics do not give grounds to assert that such improvements took place. Arguably, **the system for detection and punishment of offenders in Ukraine has not reached the level where it would be possible to effectively influence safety of roads.** Below we present several arguments for that:

- 1. No speed control.** At the time of writing this document, for about a year Ukraine had been completely lacking control speed or a practice of imposition of penalties for speeding. There is no system for automatic registration of traffic rule violations, and the National Police had stopped speed measurement with manual speed meters (radars), which was in place before the police reform. This situation can be considered a public policy disaster, because speed is the greatest risk factor that leads to the vast majority of accidents, deaths, and injuries.
- 2. Weakness or lack of police control outside major cities.** The Patrol Police covers only 28 cities of Ukraine, where approximately 14 million people (33% of the population) reside. Moreover, statistically we know that in regional centers accidents happen far less frequently than in regions - the average ratio is 35%. It should be noted that the Patrol Police also patrols some long-distance highways, such as international roads in Kyiv, Zhytomyr, Lviv, and Zakarpattia regions, but their share across the country is negligible. The rest of the country, where about 60% of road accident with victims happen - remain out of service of the Patrol Police.
- 3. There is no system of penalty points.** The system of penalty points is a recommended best practice in the EU and the US, because it is an effective way to combat systematic and violent offenders. This system even existed in the Soviet Union, but in Ukraine it is not even planned. The National Police of Ukraine initiated a law to introduce a version of the system, where the points are not added up but charged, and only for violations registered automatically. Feasibility and effectiveness of such a system is highly questionable, since it is not based on scientific evidence or internationally recognized practices. Lack of penalty points leads to the fact that for a small group of drivers who are prone to aggressive driving being stopped by police and application of sanctions are not deterrent factors against further grave violations.
- 4. Ineffective tactics to detect drunk drivers.** An internationally recognized effective means of detecting drunk drivers is random checking (Random Breath Check), which involves stopping vehicles according to a particular algorithm and checking every driver (SUPREME, 2007). This practice is not applied in Ukraine, and there are no plans to introduce it. Police in Ukraine conducts checks for alcohol only when a driver shows signs of intoxication, and an officer can detect these signs only in the two cases: (a) the driver gets involved into a traffic accident; (b) the driver commits a traffic violation, which causes the stop of the vehicle. This situation significantly reduces the risks of detection for drivers prone to driving drunk, so it is not a deterrent factor. Moreover, in terms of public policy, the practice of random checks would allow the state to have reliable

data on prevalence of such behavior as driving vehicles when intoxicated with alcohol or drugs, and therefore - to track changes in the behavior. Currently there is no reliable indicator of this problem.

Safe vehicles

The state of Ukraine undertook to guarantee it to citizens that the vehicles that travel on the roads are as technically safe as possible. This is done by setting standards and requirements for construction and technical status of vehicles operated in Ukraine. To check compliance with these requirements, there are certification systems for transport imported to or manufactured in Ukraine, as well as a rigid system of state registration of all vehicles, conducted by the Ministry of Internal Affairs. There are rather stringent requirements and powers of the state in regard to safety of commercial vehicle fleet, particularly passenger one, implemented by the Ministry of Infrastructure and its bodies. For such transport as buses and trucks, there is the requirement of mandatory technical control (not applied to private passenger cars), certification to operate, and technical control on the routes that it conducted by the special state institution "UkrTransInspektsia."

Emergency aid provision

Organization of emergency medical aid for victims in case of road accidents is subject to the Laws of Ukraine On Emergency Medical Aid and On Traffic. For this sake, the state and its local authorities must organize the work so that medical staff could comply with the standard set by the Cabinet of Ministers of Ukraine for arrival of paramedic (emergency) medical teams to the patient. This standard is 10 minutes in the city and 20 minutes outside the city, but in some cases it may be increased to 20 and 30 minutes, respectively (unfavorable weather conditions, poor roads).

Moreover, for TA participants to be able to ask for emergency aid, road owners must equip highways, streets, and railroad crossings with emergency communication system to call the National Police, emergency medical aid, and technical assistance services.

How effectively is it working?

Ukraine complies with its obligations regarding provision of emergency aid, but the quality and effectiveness of their implementation are hardly satisfactory.

- 1) **The standards for arrival at the TA scene are too high** - waiting for 20-30 minutes for lots of TA victims is critical. Lots of people die of blood loss or for other reasons while waiting for the help to come. Furthermore, even these standards are sometimes not complied with, especially in rural areas. No precise data about this could be found in state statistics.
- 2) **Quality of service, when health professionals do arrive at the accident scene, in most cases is basic** and boils down to transporting victims (or their bodies) to a health facility. There are often no technical capacity or human resources to provide emergency professional medical aid at the accident scene or during transfer to a hospital. Only a small fraction of ambulance vehicles in Ukraine have such an option, and they mainly serve cities with population over one million.

Reason 2. Lack of accountability and coordination in the field of road safety

The report by the TEN-T EU project in 2013 noted that Ukraine had an inefficient and outdated administrative system of road safety management. Within this system, the functions of management, enforcement, and control over management and execution results are delegated to the same authority - the Ministry of Internal Affairs, which violates the principle of separation of implementation and enforcement functions. However, the Interior Ministry's leadership role in the road safety public policy is rather ephemeral. For example, in the latest governmental document with which the Ukrainian state has been trying to promote safety of roads (2012 Action Plan), the government appointed as bodies responsible for performing a variety of mismatched measures 17 ministries and agencies at the national level, as well as all regional and municipal administrations, district and city executive committees. As one can guess, the Action Plan was implemented in a very small portion and yielded no positive results - by the end of the year when it was adopted, there was a sharp increase in the number of deaths and injuries.

Moreover, with the beginning of the police reform, since in 2015 the traffic police was eliminated, neither the Interior Ministry, nor the National Police can even formally be considered bodies responsible for the public policy in the field of road safety. In fact, **safety of roads in Ukraine as of today is an unattended problem**, where lots of departments are responsible - or, in other words, nobody is responsible.

Reason 3. Lack of goals, monitoring, and evaluation

In 2010, the European Union set the goal - to reduce the rate of deaths in road accidents by 50% by 2020. Based on this goal, the target curve for death rate reduction each year was derived, and the current indicator is each year checked against this target dynamics. Other states and some cities have similar targets. **Ukraine**, meanwhile, has **no declared targets in the field of road safety**. All measures, statements, and activities of public authorities and their managers are aimed only at overall "improvement" and "enhancement". The same situation is observed at the level of local governments - cities did not set clear targets in the field of road safety.

If we imagine that a goal is still to be determined, an important role should be played by indicators. In Ukraine, to assess the road safety situation and track changes, TA statistics are used, i.e. the so-called "final indicators":

- The number of TAs
- The number of TAs with victims
- The number of deaths
- The number of injuries

The standard recommended practice of the European Union is to collect and analyze not only the final indicators, but also intermediate ones - or the so-called "risk factors." These are the factors that correlate with final indicators, and therefore by influencing them it is possible to influence the number and severity of TAs:

- Driving under the influence of alcohol or drugs
- The rate of using protective devices, such as seat belts and child seats
- Traffic speed
- Daytime running lights
- The rate of vehicle fleet passive safety
- The speed and quality of emergency aid

Ukrainian authorities do not collect any data on the risk factors at all. There are even serious problems about **the official statistics of TAs**.

1. Doubtful reliability of the data. Researchers and activists have repeatedly highlighted it and expressed reasoned assumptions that official statistics underestimate the number of deaths in road accidents. According to available information from regions, at the time of writing this document the "rule of 30 days" did not apply in Ukraine - in lots of cities and regions the police do not collect or enter into the database information about the

victims who died after delivery to a hospital, and who must be accounted for in the line of "dead", not "injured". One reason for this phenomenon may be absence of a TA registration procedure - the previously applied procedure (CMU Resolution N 538 of June 30, 2005) lapsed in March 2016, while a new has not been approved.

2. Inadequate data completeness - the police do not collect a lot of the data from the TA site that are important for analysis and evaluation. For example, they do not capture accurate data on the TA location (coordinates); the level of detail of information about the TA type is insufficient: apart from "collision", it is important to understand the type / plot of the collision (frontal, side, rear, angled), and this also applies to other types of accidents (e.g., a run over pedestrians in the US is subdivided into 12 subcategories); they do not record information about using or not using seat belts by TA participants and about triggering of airbags; there is no information about the officially applied speed limit in the section where each accident took place; they do not record information on location of each victim in the vehicle. The scope of information collected on the accident site lags far behind EU standards (CADaS, 2011).
3. Inadequate data usage. Even the data collected and available to the police are used in a limited scale and offer little public benefit. The data are only published in summary, statistical analysis published is very superficial and shallow (comparison of each of the indicators to the previous period). These data cannot be broken down by totals for cities, including regional centers, and districts, thus local governments and public authorities have no access to information on the status of traffic safety in their territories. Sure, there is lack of TA data geo-localization practices and tools (mapping). The state does not benefit from data on TAs and does not let others make use of it (researchers, civil society organizations, municipalities, etc.), since no comprehensive TA data arrays are published, and it is actually not possible to obtain them.

Apart from **lack of targets and a monitoring system, Ukraine also lacks the activity evaluation component.** Executive and local authorities regularly produce public policy outputs aimed to increase traffic safety: they approve targeted action programs at country and city levels, comprehensive plans at the department level, implement certain awareness or other projects, suggest amendments to TR, the Administrative Code, hold seasonal activities like "Warning! Children on the Road" or "Road Safety Week", and so on.

Such initiatives usually encounter three challenges.

1. They are based on someone's opinion or subjective judgment, not on evidence-based models or tested practices.
2. They do not set clear measurable objectives, are not focused - usually their objectives are formulated using the verbs "assist", "improve", "increase", and so on.
3. There is no thorough analysis of effectiveness of these activities or programs, so neither the public nor authors of the initiatives actually know whether these activities, regulatory changes, programs, or projects have generally had at least some effect, and if they have - which?

Examples of such activities in recent years are: "Road Safety Month" by the National Police in 2016, amendments to the Administrative Code introducing tougher sanctions under Art. 130 (drunk driving), the introduction of compulsory use of daytime headlights in 2013, placing social outdoor advertising by the traffic inspection in 2012-2014, etc. There are more examples. Virtually every event, program, or project by the state in the area of road safety includes the fundamental flaws listed above.

4. Who are the affected parties?

The problem of road safety includes lots of stakeholders - these are institutions and organizations whose interests may be positively or negatively impacted due to changes in the public policy. To achieve high-quality and efficient solutions, not only future implementers of the solutions, but also other (external) stakeholders should be involved into the process of development of the public policy. Below, we analyze groups of stakeholders within the public road safety policy.

1. Law enforcement agencies, especially the National Police. The natural interest of the police is to reduce the number of traffic accidents and attenuate severity of their consequences. This interest is there for the two reasons: (1) such a reduction will be a significant contribution into implementation of one of the four objectives of the National Police - "ensuring public safety" (Art. 4 of the Law "On the National Police"); (2) reducing the number of TAs registered and investigated by the police will reduce the workload on the employees and free human and technical resources of the police to perform other important tasks, including crime prevention and response to crime. Moreover, the National Police is tasked with implementation and administration of automated control of TR

violations, and the National Police has its political interest and high expectations from the public for that such a system were developed and proved effective and efficient in the long-term prospect.

2. The Ministry of Health. It is interested to reduce the number of injuries on the roads, which will make it possible to save the limited resources available to the MoH (on-site work by paramedic teams and ambulance vehicles at TA scenes, victims' stay in hospitals and providing them with care). Another interest of the MoH is improving the speed and quality of medical care to victims of accidents, which will make it possible to demonstrate higher efficiency of the department. Thus, the MoH is interested in having additional resources and upgrading its logistics assets (new specialized vehicles and equipment to provide first aid etc.).
3. the State Service of Ukraine for Transportation Safety (UkrTransBezpeka). This specialized department of the Ministry of Infrastructure is immediately interested in traffic safety in line with its mandate. In the road sector area, UkrTransBezpeka is responsible for commercial traffic, freight and passenger transportation. This agency, by definition, must support initiatives in the field of traffic safety, although their interest in the initiatives that are not directly related to commercial vehicles will be less pronounced or they will be neutral. The department may also be negative about some of the initiatives, say, if they anticipate more stringent requirements for its operation or if they deprive the department of some of its functions.
4. The President of Ukraine is the highest official of the state. According to Art. 102 of the Constitution of Ukraine, **he/she** is the guarantor of state sovereignty and territorial integrity of Ukraine, of compliance with the Constitution of Ukraine, human and citizen rights and freedoms. While Art. 27 of the Constitution states that "Everyone shall have the inherent right to life. ...The duty of the state shall be to protect the human life." The President is not currently an active stakeholder, but he has a significant part of the political responsibility for citizens' safety. This is especially relevant given the blurred functions in this area and the absence of a specific body or high-level politician who the President may "point his finger at" or from whom he may request more efficient operation. The President should be interested in implementing effective reforms in this area, so that Ukraine finally mastered the problem of deaths on the roads and started demonstrating a steady positive trend.

5. The Ministry of Internal Affairs. At the time of writing, the MIA is launching the so-called service centers - a new organizational entity that, among other functions, is going to be assigned with the task of administration of training and certification of drivers, including development of requirements and criteria for licensing of driving schools. MIA service centers and their managers are currently not directly interested in improving road safety, as the number and severity of TAs has no direct effects on activities of these centers (costs or fund replenishments, sanctions, etc.). However, theoretically and politically, managers of the service centers are interested in offering more modern and quality training programs and updating the tests respectively. Besides, MIA management has a political interest in traffic safety, as traditionally the Ukrainian society perceives the MIA as the one that must "ensure order on the roads." Although since 2015, after adoption of the Law on the National Police, the Minister is not a direct supervisor of the police, he/she is and will be interested in highlighting his/her involvement in the event of success stories and positive statistics, as well as distancing him/herself from the problem and minimizing his/her image damage in the event of negative statistics or focus events, such as an accident with mass casualties.
6. Local communities represented by local governments. Their interest is reducing injuries and deaths among residents of the communities. And this interest is much more pronounced than at the governmental level, because what at the state level is abstract statistics, at a township or village level often turns into a tragedy. The mayor or councilors are interested in minimizing such cases, because people may blame them personally for such situations. Also, local political elites are interested, openly or latently, to create the most secure and comfortable conditions for living in their settlement, e.g. as a competitive advantage in the fight for talents (qualified staff), investments, or purely for image reasons.
7. Local authorities / local state administrations. In the context of road safety, these institutions have the political responsibility for what happens among cities - in particular for organizing transportation among settlements, including safety of private transport and commercial passenger traffic. Their interests here are similar to those of local communities - they have to support activities aimed at decreasing the rates. However, in the case of state administrations the interest is rather "reverse" - so that nothing bad happened. For example, an accident involving a bus with a dozen victims is a very bad development for a governor or head of the district not only because of the need to organize

the rescue operation, chair the commission, meet inspections from Kyiv, but also for image and political risks, as well as possible dismissal.

8. The State Road Administration ("UkrAvtoDor"). This is the administrator of the national significance road network, which has indirect and poorly expressed interests in traffic safety on these roads. Their primary interest is keeping the road surface in a reasonable state (smooth), which is perceived by the public as the key quality indicator, even if in terms of security this road is very poor. Being interested only in smoothness of roads, saving money and speeding up timing of project implementation, and having no institutional competence or mandate of safety management, "AvtoDor" usually fully ignores security issues, which leads to negative consequences and increases rates of accidents and deaths on road sections subject to repair or reconstruction.

9. Businesses:

- 9.1. Road transport operator companies (and their associations). These are the companies that have a large fleet of official vehicles (banks, agricultural holdings, distribution companies, food manufacturers, etc.), state-owned enterprises and agencies (UkrPost), and transportation companies (trucks, buses, and taxis) . The companies for which operation of vehicles is not a way of earning money are generally interested in improving traffic safety in Ukraine, because for them it means reducing their transport accidents and cutting down unwanted costs. These companies, especially if they have Western owners, already have their internal traffic safety policies, internal training systems, advanced monitoring systems. They tend to positively accept reasonable governmental measures in the field of road safety and can be partners, for example, by providing access to their databases. On the other hand, carrier companies and entrepreneurs have different interests. Their interest is to maximize profits by minimizing costs, which is manifested in insufficient investments into the safe technical condition and updating of their fleet, excessive exploitation of human resources (drivers working overtime), lack of safety monitoring systems. The bigger part of the market is small players, with up to 10 vehicles, and therefore objectively having no resources to invest in safety. This segment of stakeholders with high probability will oppose the safety measures that will imply more stringent requirements and control of their transportation activities. Compensation for this may be the permission

an increase tariffs and privileged lending programs for investment into transportation safety (including fleet renewal).

- 9.2. Auto service businesses, which are interested in providing mandatory car technical inspection (TI) services. At the time of writing hereof, there is no compulsory TI in Ukraine, and therefore the government has no control over the technical condition of the car fleet that appears on the streets and roads. They are likely to go back to this procedure based on the model adopted in many EU countries and US states, where TIs are conducted by private operators (service centers) authorized by the state. Auto service businesses are probably interested in taking part in this market, especially if license terms are transparent, and the cost of services economically justified. Business interests are earning directly from the compulsory technical inspection service, and using this service as an "entry point" to attract regular customers for more costly repair services. Probably, large operators - branded or network service stations - could be more interested stakeholders. However, they may lobby for conditions that exclude small players (roughly, one-lift station), which may have a negative impact in the form of market monopolization by large and expensive operators and restrictions on affordability of the TI services, especially outside major cities.
- 9.3. Insurance companies and their sector association - the Motor (Transport) Insurance Bureau of Ukraine (MTIBU). It is an association of 56 insurance companies engaged in compulsory insurance of civil liability of vehicle owners for damage caused to third parties. Interests of the insurance businesses that insure civil liability and cars is pretty clear - reduction of insurance claims, which would mean reducing administrative costs, insurance premiums, and thus increasing profitability. Actors in this market would have to support road safety activities and programs, including they could be partners or sponsors of them, positioning them as social responsibility and obtaining benefits to strengthen the brand.
10. Driver training schools. Driving schools earn money by training people to drive and could play an important role in enhancing road safety through better education of drivers. However, most of them do not do that. This is due to several factors. (1) Obsolete state-approved training programs, which pay much attention to technical and theoretical aspects (the construction of the internal combustion engine), but they omit

important tools for safe and quality car exploitation (parallel parking, elements of "Defense Driving", etc.). (2) The focus of private driving schools on gaining profit and saving cost, not the quality of results (the level of graduates' driving skills). (3) The total lack of a system to train driving instructors in Ukraine. All instructors are "self-taught", who have not been trained or certified, so everyone teaches driving to the extent of their life experience and understanding of safety driving. Thus, driving schools for the most part are not directly interested in improving traffic safety in Ukraine, although some more advanced driving schools are interested in improving the quality of training (and they are working on it), as well as modernizing the state standards and requirements.

11. European lenders and donors: The World Bank, European Investment Bank, European Commission. All of these large institutions for many years have been funding a variety of projects directly or indirectly related to traffic safety. Their clear interest is true positive changes in Ukraine in this area, and more specifically - adaptation of the best European practices. The World Bank, which finances road construction projects, has a greater interest, especially in view of the fact that the roads build with its participation have turned out more dangerous than the old roads that existed before. Besides, the World Bank is an international center of expertise on the subject, with its entire department called the Road Safety Facility. In contrast to Ukrainian organizations and policy makers, international donors generally have a high level of institutional capacity and sector expertise, and therefore they are interested only in actual systemic changes or projects and programs that are based on scientifically evidenced models of change and have a high potential impact. These projects and programs allow donors to create "success stories". Symmetrically, donors are not interested in supporting or even spending time on simulation or failure projects and programs, because they do not need more "bad projects". Overall, this group is one of the key stakeholders whose expertise can be used to build an effective system of road safety management in Ukraine.

12. Road users and community activists, represented by NGOs, initiative groups, clubs, etc. Although this movement is not massive, its representatives are quite active calling attention to the problem and coming to dialog with public authorities and local governments. These include, for example, Kyiv Association of Cyclists and bicycle organizations in other cities, Road Users' Union, Union of Pedestrian Protection, Vision Zero, etc. Autoclubs, associations, online forums, racing clubs and other

driver and motorcyclist associations are more massive, but they are not currently an active stakeholder in the issue of road safety. However, they are closely monitoring all the actions and proposals of change that are covered in the media and can quickly mobilize if they consider that their interests are at risk, e.g. in case of introduction of more stringent traffic rules or penalties for violations. Important stakeholders at the local level are local NGOs fighting for improved quality of living, conditions for children in the city, and effectiveness of local governments. For them, the topic of road safety is not the main one but important, so they can mobilize and be partners in local tactical and strategic activities.

5. Solution options.

1. Keeping the status quo and gradual elimination of drawbacks

This option means no change in public policy approaches, just starting to better comply with what is already required. With this option, everything generally remains as it is, only there are changes and improvements initiated by individual executive authorities, the Parliament. For example, the National Police or the MIA can finally develop and set up a system for automatic registration of traffic rule violations, the Parliament can increase the degree of responsibility for dangerous violations, the government can go back to statutory technical control, modernize state construction codes and standards of training at driving schools, as well as the rules governing driving tests, the Ministry of Health can improve the speed and quality of emergency aid. If some public agencies simply start better fulfilling their obligations described above, within their existing competencies, it is likely that the degree of road safety will gradually tend to improve.

2. Concentration of authority and responsibility within one ministry

Under this option, responsibility and leadership in development of the public policy will be concentrated in the hands of one of the existing bodies - for example, the Ministry of Interior or the Ministry of Infrastructure. The designated ministry may be given additional powers, within its structure it is possible to establish a special unit - say, The Center for Road Safety, develop an action strategy, and allocate the respective financial resources. In this case, a specific ministry can undertake the role of "the leading agency", simultaneously performing the functions of monitoring and evaluation of activities and policies of other executive bodies and local governments. Besides, in this case there would be a more understandable politically responsible figure - the respective

minister. Disadvantages of this option are that for any ministry the road safety issue will not be a priority one, and it is rather hard to imagine execution of the minister's political liability (for example, resignation of the minister in case Ukraine fails to achieve the target indicator of a reduced number of deaths on the roads).

3. Setting up a new executive authority for road safety

This option involves creation of a new central executive body, e.g. having the status of an *inspection*. Such a body could obtain from other public authorities the mandate to develop public policies and standards in the field of safe roads, safe vehicles, driver training, and the functions of monitoring implementation of these rules and applying sanctions for non-compliance. This body would take care of the quality of driving schools' operation (through certification), set up and control a system for training driving instructors, the system of automatic registration cameras, etc. Creating such a body with a wide range of powers is stipulated in the draft Law On Road Traffic and Its Safety, which in 2015 was registered in the Verkhovna Rada of Ukraine. The obvious positive consequence of this option will be concentration of political responsibility in the hands of the head of the agency; road safety as a priority in work of the agency; better coordination, monitoring and evaluation of outcomes. However, this option also has several important consequences. The first one is a conflict of interest: when one public body develops a public policy, implements it, and conducts control, monitoring, and evaluation of consequences of the implementation, such a system is not reliable or effective. Another negative consequence of this course of action is significant corruption risks associated with the probable extensive licensing and control functions of the department.

4. Setting up a system for coordination, monitoring, and evaluation

The last option is to build a reasonable mechanism for coordination, monitoring, and evaluation. Thus, public policy development functions remain with the Parliament and ministries, and the functions of policy implementation - with the relevant executive authorities and local governments. This option can be implemented by, for example, establishing an inter-agency Road Safety Council composed of representatives of all major stakeholders (from ministries - at the level of deputy ministers). One of options for the possible legislative framework and the scope of powers of such a coordinating institution for Ukraine is proposed in draft law No. 4275 of 18.03.2016 (On amendments to some legislative acts of Ukraine concerning improvement of public administration in the area of road

traffic organization and safety, the authors: MPs of Ukraine I. Didenko, Ya. Dubnevych, S. Yevtushok et al.), which provides for establishment of the National Agency for Road Traffic Organization and Safety in the status of the central executive authority whose activities are directed and coordinated by the Cabinet of Ministers of Ukraine through the Minister who implements the public policy in the field of transport. This agency, according to the idea of authors of the draft law, should be guided by a Supervisory Board of 10 persons delegated by three ministries, the Parliament, the President, and NGOs. In addition to coordination and monitoring functions, authors of the draft law propose assigning to it the functions of implementation of the public policy in the field of road safety, drafting laws and other legal acts, development and definition of a single procedure of traffic organization and safety, verification and approval of standards of road construction and transport safety, which probably rather fall under the mandate of executive authorities.

The proposed approach to resolving the issue

This document recommends Ukraine to choose the fourth option - to set up a mechanism for coordination, monitoring, and evaluation within a dedicated institution, which will be the lead agency for road safety issues. Creating such a lead agency has repeatedly been mentioned in recommendations of international organizations, both general and those intended for Ukraine. The World Bank in its report "Death on Wheels" (2009) notes that in order to achieve results, it is important to set up such a separate agency with a clear mandate and adequate and sustainable budget that will have political support at the highest level.

The Bank emphasizes that in the world there are a great variety of organizational structures and forms for such a lead agency, and there is no one recommended option - each country builds up its own system, depending on the institutional history and the legislative context.

The key tasks that may be assigned to the lead agency are:

1. Coordinating the multiple governmental agencies in charge of commercial and passenger transport, infrastructure, urban planning and construction, health care, education, and law enforcement.
2. Analytical processing of official statistics, drafting and publishing reports and data sets relating to road safety.
3. Developing a system for collection and analysis of safety indicators (Safety Performance Indicators), above all - speed, use of protective devices, drunk driving.

4. Development and supervising of the road safety audit system at the stages of its design, construction, and operation of roads.
5. Evaluation of efficiency and effectiveness of programs, initiatives, and projects implemented by other organizations, as well as implementation of own research, including pilot, projects.
6. Development of and accountability for implementation of the public policy to improve road safety.
7. Development and implementation of road safety campaigns in cooperation with other governmental agencies, the public and private sectors.

According to a recommendation by the World Bank, if the coordinating body exists in the form of the Safety Council, it must be lead by a senior official, such as the Infrastructure Minister, Vice Prime Minister, or the Prime Minister. This council should have a permanent secretariat consisting of experts in the field of road safety.

The criteria that will help maximizing success of the lead agency in Ukraine can be found in recommendations of the World Bank (World Bank, 2009) and the World Health Organization (WHO, 2015):

- The status of a separate institution with a clear mandate to improve road safety
- An adequate and stable budget - both for starting the work, and for operational and project activities
- Clearly defined ambitious goals and indicators to assess the degree of achieving them
- A permanent secretariat with high organizational capacity
- Confidence and cooperation-based relations with all groups of stakeholders, in particular in the national, public, and academic sectors
- Continuous monitoring and evaluation of the institution's success, e.g. through the mechanism of the Council and by the parliamentary committee

Such a coordinating mechanism could take the form of an inter-agency Road Safety Council, the status of which is yet to be determined (as an option - a public agency). This Security Council can be composed of senior representatives of key public institutions that make decisions and control activities. The executive part will be the permanent secretariat.

Despite its rather wide range of powers, this institution should not take over the functions of public policy making, which will still belong to ministries and the Parliament. However, the authorities responsible for policy making should take

into account the professional opinion and recommendations of the lead specialized agency.

Similarly, this coordinating and monitoring institution should not undertake implementation of the public policy, replacing existing state mechanisms or creating new ones. However, there may be exceptions from this rule, for example, in the form of the mandate for implementation of pilot projects and coordinated road safety campaigns, implementation of which is not currently a priority of any of central authorities.

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Summary

This policy paper is devoted to the issue of traffic crashes and injuries on the roads of Ukraine. The document provides a brief assessment of the scale and scope of the problem and indicates three key policy issues that explain Ukraine's poor performance. It describes in details the obligations that the governance system of Ukraine owes to the society in the field of road safety, divided into four domains - safe roads, safe road users, safe vehicles and emergency responses, and assesses the government's performance in each of them. This analysis cover specific government's functions such as training and licensing of drivers, traffic law enforcement, certification and licensing of vehicles and transportation services, road construction and management standards etc. The paper also provides a detailed analysis of stakeholders in the policy field of traffic safety, identifying them in groups and describing their main interests in a policy dialogue. At the end, the policy paper describes for policy alternatives that Ukraine's politicians may consider in order to tackle the issue of dangerous roads in a systemic and successful way, and specifically suggests one of them as the recommended way to go.