

# **The Safe System Approach in Action**

Improving post-crash capacity in  
Moldova

Case study

This case study is part of a package of materials accompanying the final report of a joint International Transport Forum–World Bank Working Group, entitled *The Safe System Approach in Action*.

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# Introduction

This case study was prepared by a joint International Transport Forum–World Bank Working Group convened in 2020–2021. The case study forms part of a package of materials accompanying the Working Group’s final report, *The Safe System Approach in Action* (ITF, 2022a).

The Safe System approach to road safety takes as its starting point the ethical position that there is no acceptable level of road deaths and serious injuries. The report proposes a framework for designing, implementing and assessing projects with a Safe System focus. It draws on lessons from real-world case studies to offer guidance on implementing Safe System interventions.

The Working Group analysed 17 case studies in total, paying special attention to their Safe System content. While not every case study was a perfect example of the Safe System approach, all contained valuable lessons. In addition, several common themes emerged. A separate ITF Working Paper (2022b) sets out the thematic analysis.

This case study contains four parts. First, it provides context for the specific intervention and the road-safety problems it aimed to solve. Second, it outlines the interventions implemented to solve these problems and the results. The analysis is structured according to the five key components of the Safe System framework outlined in the main report (ITF, 2022a), namely:

1. **Establish robust institutional governance.** Permanent institutions are required to organise government intervention covering research, funding, legislation, regulation and licencing and to maintain a focus on delivering improved road safety as a matter of national priority.
2. **Share responsibility.** Those who design, build, manage and use roads and vehicles and provide post-crash care have a shared responsibility to prevent crashes resulting in serious injury or death.
3. **Strengthen all pillars.** When all road-safety pillars are stronger, their effects are multiplied; if one part of the system fails, road users are still protected.
4. **Prevent exposure to large forces.** The human body has a limited physical ability to tolerate crash forces before harm occurs; the system should prevent those limits from being exceeded.
5. **Support safe road-user behaviour.** While road-user errors can lead to serious harm, the Safe System focuses on roads and vehicles designed for safe interaction with road users. It supports humans not to make mistakes and tune their tasks as much as possible to their competencies.

Third, the case study identifies lessons from the project, again structured according to the five key components of the Safe System framework. Fourth, it offers conclusions.

Access the full set of case studies on the ITF website: <https://www.itf-oecd.org/safe-system-in-action>.

# Context

To address the limited capacity of Moldova’s fire service to respond to road crashes, FIRE AID, a British charity, provided it with vehicles, essential rescue and medical equipment, and up-to-date training for more than 1 200 fire fighters. The aim was to enable the emergency services to improve response and extrication times and, therefore, reduce road-traffic fatalities.

*Road-safety themes: Post-crash care*

The long-term trend for road crash fatalities in the Republic of Moldova is decreasing. Between 2010 and 2020, road crash fatalities per 100,000 inhabitants dropped by 44%. However, the road crash fatality rate in Moldova remains high – at just under 12 fatalities per 100 000 population in 2020. The World Health Organization (WHO) has suggested that good post-crash emergency response could reduce road fatalities by up to one-third (Wambulwa and Job, 2019).

In 2013, a British charity, FIRE AID and International Development (FIRE AID), conducted an initial assessment of the post-crash capacity of the emergency services in Moldova, working with the Ministry for Internal Affairs (MIA) and the country’s fire service. The report found that the fire service had very limited capacity to respond to road traffic collisions. Only eight of Moldova’s fire appliances had vehicle extrication capability and only 7% of the fire service’s fleet met the government’s own terms of service.

The proposal was to utilise FIRE AID’s professional volunteer trainers along with its access to decommissioned (but perfectly usable) fire and rescue equipment to provide the fire service in Moldova with modern equipment and up-to-date training. This would allow the emergency services to improve response and extrication times and therefore reduce road traffic fatalities.

## Funding

The embassies of the United Kingdom and the United States funded the delivery of equipment and training over five years, mainly covering the costs of travel by expert trainers and equipment transport. Donated equipment and specialist training was provided by 10 British fire and rescue services, which provided 50 expert volunteer trainers addressing different training needs. The Eastern Alliance for Safe and Sustainable Transport (EASST), a FIRE AID founding member, provided support in the form of project management and administration, while the Automobile Club of Moldova (ACM) provided local project management.

## Actors and leadership

The MIA was the main Moldovan government body providing leadership and facilitating all aspects of the project. The local non-governmental organisation involved in the initiative, the ACM, was essential to the project’s success. ACM worked closely with the British and US embassies and was instrumental in gaining the co-operation of the General Inspectorate of Emergency Services in Moldova (GIES) and the MIA.

The initial assessment team was made up of six international organisations under the umbrella of FIRE AID: EASST, the World Rescue Organisation (WRO), Operation Florian, Staffordshire Emergency Services Humanitarian Aid Association (SESHAA), Blythwood Care, and the Scottish Emergency Response Association (SERA).

## Interventions and results

Between 2013 and 2018 FIRE AID and the ACM delivered 45 modern fire appliances as donations to the GIES. These have been used to respond to over 20 000 incidents and continue in use. In addition, five fully equipped ambulances and over 63 sets of road traffic cutting equipment were donated. As of 2018 this donated equipment had been used to extricate over 250 people. British expert trainers have provided certified training to over 1 200 fire fighters across Moldova.

### Establish robust institutional governance

One of the most important factors in Moldova's road safety success was the ongoing support of the MIA which is the state authority leading the National Road Safety Council. Within the council, two organisations are responsible for prevention of road crashes and post-crash response: the National Police and the GIES.

Equipment and training were just two of the priorities identified for improvement. Between 2011 and 2020, another key objective for the Council was the implementation of a national system for emergency calls with the single European number 112. Having a single response and dispatch number reduces public confusion and therefore reduces the time it takes to speak to the right operative who can dispatch the emergency services to the scene of a crash.

During the coming Second Global Decade of Action on Road Safety, post-crash response remains high on the MIA agenda. Some of the key actions to be taken under Objective 1, Priority 1 of the National Road Safety Strategy 2021–2030 include:

- Creating a system of educating the public in providing first aid;
- Creating a system of professional training in providing first aid for volunteers in the field in case of road crashes;
- Development of sectoral road safety programmes in the field of emergency rescue;
- Strengthening the capacities of specialised intervention units, including the emergency medical service and the release-rescue service, and the co-ordination of their actions, according to the classification of the road cases in the 112 system; and
- Increasing the number of units providing first aid in case of road crashes, as well as equipping them with the necessary equipment.

Post-crash care is also the focus of Objective 6, Priority 3, which aims to:

- Reduce the time of detection of the road crash and notification to the intervention teams;
- Ensure the operability of emergency interventions and transport of victims to medical institutions;
- Promote medical standards for intervention at the scene of crashes;
- Create emergency reception units and emergency departments in hospitals; and
- Produce ongoing evaluations of the effectiveness of first aid and recovery.

## **Share responsibility**

Part of the training programmes delivered within this initiative was to develop a “victim-centred” approach to post-crash response which avoided judgement or blame. Moreover, joint training across the emergency services was a key part of the training. Collaboration between services and clear definitions of their roles at the scene of a crash have been essential to smooth and timely post-crash response providing the best possible outcomes for road victims.

A positive development growing from this training was that from 2013 the MIA and the Ministry of Health agreed to co-respond to road traffic incidents. The ambulance, police and fire services now work together at the scene of an incident. It is the responsibility of the fire service to extricate the casualty and secure the scene, while the ambulance service is responsible for caring for and transporting the casualty, and the police report the incident and collect data. This shared responsibility means greater interoperability and understanding between services, so that no time is wasted during rescue operations.

## **Strengthen all parts**

This project with the Moldovan fire and rescue service went hand in hand with the ACM’s ongoing work on road safety in Moldova. This has included many projects to improve law enforcement, develop safer road infrastructure, establish road safety education and behaviour change programmes, and enhance local road safety management. The ACM played a key role in advocating for the creation of a National Road Safety Council and a single emergency response number (112). This joint, rounded approach to road safety contributed to an overall reduction in road deaths.

## **Prevent exposure to large forces**

Road traffic crashes should not be fatal. Providing a timely, well-trained and equipped emergency response service working with mutually agreed protocols can make the difference between life and death for a road casualty. It is essential that the casualty be treated within the first hour after an incident or ideally within the first 10 minutes after a crash to ensure they have the best chance of survival. In Moldova, this project greatly contributed to reductions in reaction times to road incidents, from an average of 60 minutes in 2009 to less than 15 minutes in 2018 – greatly improving a victim’s chance of survival from a road traffic incident.

# **Lessons**

## **Co-operation between multiple stakeholders**

The project brought together multiple stakeholders, each playing an essential role in the success of the project. Co-operation and co-ordination between these stakeholders was crucial. In addition, the project could not have succeeded without a strong in-country champion that understood the situation and could

communicate with key stakeholders. The ACM's local knowledge, contacts and effective operations were key to gaining support from relevant decision-makers and government departments.

Coupled with this, the support of British fire and rescue services was essential. These services donated their re-commissioned equipment free of charge and allowed expert trainers to take time off from their own work to train the Moldovan emergency services. The volunteers also gained from the project, enhancing their own experience and perspectives as safety professionals.

## **Political buy-in**

Without the support of the key Moldovan public authorities – in particular the GIES and the MIA – this initiative would not have been possible. This was recognised in the memorandum of understanding created between the international partners (EASST, Operation Florian and UKRO) and the MIA. The memorandum was essential to getting equipment donations into the country, for approval of the training programmes that were delivered, and for ensuring the availability of trainees on a “train-the-trainer” basis.

## **Sustainable funding and practices**

Achieving significant change in post-crash response in Moldova required a partnership of trust between all stakeholders, especially with the GIES. The success of this project and its ongoing impact were based on a long-term project plan which was fully funded for a number of years. This allowed the project to have a greater impact, adapting and developing as new needs were identified.

Sustainability was also provided in other important ways. An initial capacity review was conducted to ensure the equipment and training donated met local priorities. No equipment was donated without an initial assessment of the availability of spare parts and suitable storage facilities to prevent equipment falling into disrepair. All equipment donated was accompanied by training on a “train-the-trainer” basis – including training in maintenance – leaving a legacy of expertise. Data collection on the use of equipment and the impact of training were required as part of the project, enabling an assessment of the value of these donations. Finally, an ongoing dialogue between the emergency services and the local partner (ACS) ensures any new issues can be addressed as they arise.

# **Conclusions**

Rapid effective emergency response can save lives and reduce disabilities. This programme has improved emergency response in Moldova through provision of modern fire appliances, extraction equipment and extensive training. The appliances, equipment and training are being put to effective regular use.

Shared responsibility for emergency response by ambulance, police and fire services has been improved. Many stakeholders collaborated around the provision by FIRE AID, which also required funding by multiple donors. The outcomes highlight the importance of assessment of the current situation to ensure data-driven actions and of political buy-in.

## References

ITF (2022a), *The Safe System Approach in Action*, Research Report, OECD Publishing, Paris, <https://www.itf-oecd.org/safe-system-in-action>.

ITF (2022b), “Safe System Implementation in Practice”, ITF Working Paper, available on request.

Wambulwa, W.M. and S. Job (2019), *Guide for Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles*, World Bank, Washington, DC, <http://hdl.handle.net/10986/33363>.



# **The Safe System Approach in Action**

## Improving post-crash capacity in Moldova

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This case study details a project to increase the capacity of Moldova's ambulance, police and fire services to provide adequate post-crash care and therefore produce better outcomes for road-crash victims.

The case study is part of a package of materials accompanying the final report of a joint International Transport Forum–World Bank Working Group, entitled The Safe System Approach in Action.

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The report also draws on lessons from real-world case studies to offer guidance on implementing Safe System interventions. While not every case study was a perfect example of the Safe System approach, all contain valuable lessons for policy makers and road-safety actors.