



TACIS EU KOLARCTIC PROJECT

POLAR TRAFFIC SAFETY 2007/139-580

Technical report WP5

Technical assistance to newly born Traffic Safety Association in Arkhangelsk

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Foreword

This report forms Technical Report WP5 in the context of the Tacis Kolarctic “Polar Traffic safety” project. It is concerned with the technical assistance to traffic safety association in Arkhangelsk. The name in registration statutory documents is: Non-governmental traffic safety partnership “Green Wave”.

Section 1 represents the results of the kick-off meeting with core parties in Arkhangelsk (Avtodor and the local traffic police).

Section 2 represents training course of two local traffic safety specialist (one employee of the Arkhangelsk traffic safety association and one GIBDD officer responsible for prophylactic work) in Sweden for 10 days.

Section 3 is concerned with selection, adaptation and translation of training materials (e.g. for schools) from sister organizations to Russian usage.

Section 4 deals with provision of technical assistance to “Green Wave” in the following issues:

- organization of the citizen participation in Archangelsk city complex transport plan (e.g. public hearings etc.)
- getting recognized and planned the pedestrian and bicycle transport as equal mode of transport in the in Archangelsk city complex transport plan (e.g. special light traffic network, which has been ignored for the time being in the Russian urban planning)
- participation in city and road administration transport projects promoting traffic calming solutions (e.g. roundabouts and raised pedestrian crossings and traffic dividing islands)
- participation in discussion of civilized car and bicycle parking planning.

Section 5 is concerned the project results dissemination:

The Lecture Day in Arkhangelsk State Technical university “Traffic safety experience exchanged for occupied in transport infrastructure” (Arkhangelsk, 23/04/09), The conference “Improvement of the accidents statistics system”, (Saint-Petersburg, 26-

28/04/09), The final international conference on “know-how” transfer (Arkhangelsk, 20/05/09)

Section 6 represents short results of the other activity of the NP “Green Wave” in the framework of the project.

The kick-off meeting with core parties in Arkhangelsk

The first meeting with the core parties of the project was held on 9 June 2007 in the premises of the Arkhvtodor during the International traffic safety days. The participants of the meeting were as follows:

Vikstrom Elena	Swedish Road Administration, the Northern Region
Gillnäs Peter	Swedish Road Administration, the Northern Region
Maksimov Alexey	Arkhangelsk city road police
Kulizhnikov Denis	Arkhvtodor
Razheva Nadezhda	NGO on RTS “Green Wave”

The following important issues were discussed during the meeting:

- Arkhangelsk region road industry
- “Polar Traffic Safety” project presentation
- Traffic safety audit in the Arkhangelsk Region

19 February 2008 director of the NP “Green Wave” on behalf of all the partners made the presentation of the project “Polar Traffic safety” during the ENPI Kolarctic seminar in Arkhangelsk.

Training course in Sweden (Luleo), 1-9 February 2009

Training course of two local traffic safety specialists:

Alexey Maximov – local road police chief

Nadezhda Razheva – director of the Non-governmental traffic safety partnership “Green Wave”

Date: 1-9 February 2009

Place: Luleo, Buden (Sweden)

Organizer: Training course was organized by the Swedish Road Administration, Northern Region - Leading Partner of the project

Objectives: Sweden is the country with the best traffic safety records and its technologies and experience could be very useful for Russia to meet road safety target.

Concept “Vision Zero” was introduced In Sweden in 1995. Vision Zero is an image of a future in which no one will be killed or serious injured - the loss of human life in traffic is unacceptable. Vision Zero is also the basis for the work conducted on road safety in Sweden and it is an attitude to life and a strategy for designing a safe road transport system.

Road safety in the spirit of Vision Zero means that roads, streets and vehicles must be much more adapted to human capacity and tolerance. Vision Zero can accept that accidents occur, but not that they result in serious human injury. The responsibility for safety is shared between those who design and those who use the road transport system.

Programme

1 February (Sunday)

Arrival to Luleo

2 February (Monday)

Visit to NTF office – National Traffic Safety organization, founded in 1934.

There are 23 regional NTF offices that coordinate all traffic safety NGOs activity in Sweden. Traffic safety projects are developed by NGOs, police and rescue services together. Then the projects are evaluated by the Congress (top executive body of NTF).

27 mln SC (about 135 mln rubles) were appropriated for traffic safety projects implementation.

Examples of NTF activity:

- Traffic flow measuring on request of schools, associations of habitation owners;
- Demonstration of simulators: «Drunk & Dangerous Glasses», Car chair simulator (7 km/hour) and turning upside-down “Volvo” - demonstration of safety belts effectiveness;
- Radio and TV broadcast.

The most important task for NTF – coordination of all parties’ activity.



Photo 1 NTF: Regional office chief

In NTF office any person can get consultation and all instructions concerning safety transportation of kids in cars. Qualified personnel also instructs on correct installation of child seats which can be rent in the office.

Any person also can get reflectors, brochures and leaflets on traffic safety:

- Stopping and parking;
- Driving in a roundabout
- Pedestrian and bicycle crossings
- Choose the right vehicle-lighting;



Photo 2 NTF: Simulator for correct child seat installation



Photo 3 NTF: different types of child seats that can be rent

3 February (Tuesday)

1. Visit to LLT (Luleo Local Traffic) office

LLT is a municipal enterprise that realizes public transportation in the city. There are 55 buses, 95 drivers and 16 administrative persons in LLT.

Local traffic works from 05 a.m. till midnight.

In 1965 LLT reduced bus conductors.
Since 2003 traffic flow increased 25%.
LLT has its own garage and repair shop.



Photo 4 LLT: repair shop



Photo 5 LLT: garage

52 buses use diesel oil and 3 buses use ethanol (controversial point: ecological compatibility and expensiveness).



Photo 6 LLT: ethanol filling

Buses are washed and cleaned at nights by special company (outsourcing).



Photo 7 LLT: buses are waiting for washing

Every new driver takes 3 weeks of probation period under the tuition of a coach. There are 9 coaches among 95 drivers.

At the beginning of the shift every driver passes alcohol test with the help of alcolock.



Photo 8 LLT: alcolock test before the working shift

Every bus in LLT equipped with GPS. Traffic superintendent can control position of any bus and time table.



Photo 9 LLT: GPS system

All buses stops in Lulea are equipped with indicator boards. So, You can get information in what time the bus will arrive to the stop.



Photo 10 Luleå: bus stop with indicator board

Since 2008 ecodriving style is introducing on LLT. Such driving style saves 12% of oil.

One of the stimulatory measures that used for public transport is “green wave”: special sensors under the pavement change traffic lights for buses.

From 2009 all the buses should have low floor for disabled people mobility.

Since 2008 all intercity traffic buses equipped with seat belts.

2. Rescue center.

There are 18 rescue centers in Sweden. They are the first that get information on any accident. Then a dispatcher engages other services: ambulance, police, or firemen. The dispatchers get 1200-1300 calls annually.



Photo 11 Luleo: rescue center chief
Rescue centers have the modern equipment and technique.



Photo 12 Luleo rescue center: modern equipment for fire extinguishing and metal scission



Photo 13 Luleo rescue center: thermal imager

4 February (Wednesday)

1. Visit to driving school in Buden.

In this driving school students can get driving licenses of A,B,C,E categories.

“C” license costs 30 thou SC (150 thou rubles). Students of gymnasiums interested in professional education can obtain “C” license free of charge and work as drivers after the graduation.

Ecodriving is a part of educational programme for all categories. According to statistics such driving style saves oil and improves traffic safety on 5-15%.

In Sweden road accidents with heavy vehicles amount 20% of all accidents. The main reason is a fatigue (fine for work and rest regime violation is 30 thou SC (150 thou rubles).

This driving school participates in international projects and information campaigns for traffic safety improvement.

Example: information campaign for schoolchildren «Look – see – react», which explains that trucks’ drivers not always notice the pedestrians because of vehicle dimension.



Photo 14 Buden driving school: training heavy vehicles

2. Meeting with the Road police chief of the Northern region.

The police is the System designer of Traffic policing, Control, investigation of traffic crimes and Enforcement of the Road Traffic Act and Regulations.

36 policemen worked in road police of the Northern Region in 2006 and now - only 7 policemen. All policemen work on the roads: one group with the heavy vehicles (buses, trucks), another one with the cars (aggressive driving). In 2009 was decided to increase the staff because of more often cases of impair driving.

Drunk driving is the reason of 50% of all accidents with victims.

Statistics of the Northern Region:

- in 2000 there were no cases of drug use among the drivers

in 2008 404 drivers were arrested due to drug use and 616 drivers due to alcohol use.

79 000 random tests are carried out on the roads of the Northern Region annually. At least one third of driving licence holders are at risk of being tested during 12 months.

Long term goal: All cars should be equipped with an electronic driving license in combination with an alcohol ignition lock device!

5 February (Wednesday)

Visit to training center in Piteo.

To obtain driving license of “B” category all students must get one-day training course “Driving on the slippery road”.

The training course consists of:

- Simulators’ use for demonstration of passive safety equipment effectiveness;
- Theory;
- Driving on the slippery road with/without ABS, ASS.

The training center works all the year round. In warm periods (summer, spring) ice is replaced by oiled metal plates.

Every student gets points for driving skills on the slippery road and the results sent to the driving school where he/she obtains the driving license.



Photo 15 Piteo: simulators’ demonstration



Photo 16 Piteo: passive safety equipment



Photo 17 Piteo: simulators' demonstration



Photo 18 Piteo: theory before driving (speed limits, where to apply the brakes)



Photo 19 Training course: slippery section



Photo 20 Training course: slippery section



Photo 21 Training course: instructors' tower



Photo 22 Training course: instructor commands by the radio station

6 February (Friday)

Visit to BDX Foretagen AB

BDX is the biggest company with heavy vehicles fleet in Sweden. It unites 400 small companies that rent BDX vehicles. The leading office is situated in Luleo (8 offices in the Northern Region). 200 people work in BDX. Heavy vehicles (800 structural engineering machines and 800 lorries) are used for roads' maintenance, construction and reconstruction, cargo transportation.

Inner safety codex is developed in BDX. Its objectives:

- support of "Zero" Vision Concept
- everlasting activity to meet traffic safety target.

Swedish Road administration is the customer of the road maintenance service and it demands:

- legislation observance
- speed control, safety equipment use, sobriety (zero alcohol doze on the working place)
- professional drivers are personally liable for road safety behavior
- good vehicle technical condition
- use of safety devices (reflectors)
- work and rest regime observance.

Every new driver gets training course which includes:

- safety style of driving,
- first aid
- ecodriving (HeavyEcoDriving: www.foranfokus.se)
- coaching.



Photos 23,24 BDX: multifunctional technique

7 and 8 February (Saturday, Sunday)
Road safety infrastructure and road maintenance



Photo 25 Regional road: traffic signs and landmarks



Photo 26 Luleå: defending posts



Photo 27 Luleo: parking machine



Photo 28 Luleo: bicycle parking



Photo 29 Luleo: parking on the ground floor of administrative building



Photo 30 Luleo: parking in residential area



Photo 31 Luleo: underground parking



Photo 32 Luleo: elevated pedestrian crossing



Photo 33 Luleå: parking in residential area



Photo 34 Luleå: snow removal



Photo 35 Luleo: bicycle and pedestrian path



Photo 36 Luleo: barrier on the pedestrian and bicycle path



Photo 37 Luleo: arch is used for parking



Photo 38 Luleo: multilevel parking



Photo 39 Luleo: gate



Photo 40 Luleo: safety island, bus stop



Photo 41 Luleo: crushed stone is used instead of sand





Photo 42,43 Jokkmokk province: information camping aimed at animal accidents

Resume:

As result of the training course we could realise how improvement of strategies, methods, modern technique, up-dating of the legislation as well as the repressive system in complex will cooperate to reach the level of improved safety.

On the regional level we can use the following measures:

- The Road environment: physical measures on the road network such as middle barriers, roundabouts; proper winter maintenance; civilised parkings (for cars and bicycles); bicycle and pedestrian paths.
- The Human: improvement of the driver training (in difficult road conditions), quality improvement programs in the companies of the commercial traffic (buses and lorries), improved use of seat-belts and child restraints in urban and rural road traffic (Information by NGOs and enforcement by police);

Selection, adaptation and translation of training materials

The following materials was translated and adopted for participation in seminars, public hearings, round tables and training course in the framework of the project:

Material	Pages translated
<ul style="list-style-type: none"> ▪ Pedestrians' use of reflector, use of bicycle helmet and use of children's safety devices in Finland (Power point presentation), Liikenneturva, Traffic Safety Organization of Finland 	21
<ul style="list-style-type: none"> ▪ The Swedish Government measures to combat the negative effects from drunk driving (Power point presentation), The Police Authority, County of Västerbotten 	35
<ul style="list-style-type: none"> ▪ Saving 20 000 lives on our roads. A shared responsibility European road safety action programme ©European Communities, 2003 	5
<ul style="list-style-type: none"> ▪ Buckle up Your Child - Road Safety project in Poland 2001-2004 (Power point presentation), Daimler Chrysler Automotive Poland 	25
<ul style="list-style-type: none"> ▪ Children in cars: how to protect Your child (Brochure) 	11
Total	97

Technical assistance to “Green Wave” in the following issues:

4.1 Organization of the citizen participation in Arkhangelsk city complex transport plan

Arkhangelsk city complex transport plan has being developed during the 2 years. All the components of the transport system were analyzed.

For getting more complete information and improving awareness of the process several seminars in the public hearings format were organized.

NP “Green Wave” participated in organizing and implementation of the following seminars:

February 2008

“Vehicle infrastructure development in Arkhangelsk”

Aim: perspectives of vehicle infrastructure development (parking, garages, services) on the basis of PPP.

Target group: legislative and executive municipal power, business, road police, NGOs.

Result: Nordic countries experience was suggested to Arkhangelsk.

April 2008

«Ways of traffic impact minimization on urban environment quality: congestion, accidents, public health. Prognosis.»

Aim: to present traffic impact evaluation (congestion, accidents, public health) on the results of pilot researches: “Air pollution level and plants influence on diffusion of pollution”.

Target group: legislative and executive municipal power, ecologists, NGOs.

Result: Presentation was made “Measures for speed control”

May 2008

“Quality of road maintenance in Arkhangelsk”.

Aim: search for ways of quality road maintenance system development.

Target group: executive municipal power (customer) and contract organizations, road police, mass-media.

Result: Presentation was made: “Quality of road infrastructure maintenance”.

June 2008

“Public transport system development in Arkhangelsk”

Aim: search for ways of improving public transfers and users attraction.

Target group: directors of transport organizations, road police, city administration, NGOs, mass-media.

Result: presentation was made: “Public control on passenger transport”

October 2008

“Finance possibilities and limits for traffic system development in Arkhangelsk”

Aim: to present Project Cycle Management methodology for projects evaluation

Target group: municipal legislative and executive power, economists, mass-media, road police, NGOs.

4.2 Getting recognized and planned the pedestrian and bicycle transport as equal mode of transport in the in Archangelsk city complex transport plan

An analysis of conditions for light traffic development in Arkhangelsk was carried out. It was a coordinated activity of NP “Green Wave”, NGO “Arkhangelsk on bicycles” and Regional Association of disabled people.

Objectives: promoting of light traffic for mobility of the population.

Target group: youth, disabled people, sportsmen, young parents.

Activity:

- An inquiry of the bicyclists was carried out in Arkhangelsk in summer of 2007. It was made by e-mail, personal meetings, and web-site. 88 bicyclists took part in the inquiry and the results were used in the Arkhangelsk city complex transport plan development, (Chapter: Light transport development in Arkhangelsk).
- presentation “Project on light traffic development in Arkhangelsk” in the framework of “Europe Day” in Arkhangelsk, 21 June 2008
- light transport promotion during the round table “Youth of Arkhangelsk” (11.06.08)
- media patronage (article in the newspaper “Business class” № 24 – “Arkhangelsk is dreaming for light transport”)

4.3 Participation in city and road administration transport projects promoting traffic calming solutions

In 2008 members of the NP “Green Wave” took part in the traffic flows investigations of the crossing (roundabout) Voskresenskaya str/Obvodnyi Channel av. The report was done on the results with photos and statistics. On the bases of this report (with local traffic safety experts assistance) concrete proposals were made for the Department of roads and bridges of the city municipality: safety islands, raised pedestrian crossings, changes in traffic conditions - “preference should be given to vehicles that are already in a roundabout”.



Photo Roundabout Voskresenskaya str/Obvodnyi Channel av.: wrong traffic organization – traffic is staying on the “ring”.

18 September 2008 director of the NP “Green Wave” took part in Arkhangelsk General Plan public hearings. It was suggested by her to organize traffic roundabout on the crossing Obvodnyi Channel av./Gagarina str.

In 2008 analyses of traffic calming solutions in Arkhangelsk was made and presentation was prepared.

Example:



Photo

BEFORE median island construction



Photo

AFTER median island construction

Background: from practice it is known that many physical improvements to the road have been shown to be highly effective. Improving the infrastructure means creating a safer travel environment. Infrastructure improvements that tolerate human error and take account of vehicle safety limitations, can provide high levels of mobility while preventing crashes or serious injuries.

Treatments such as speed humps, pavement narrowing, median islands, 'raising of the road surface' and roundabouts can result in significant speed reductions and reductions in speed variation. Roundabouts have been shown to not only reduce crash frequency by some 70 to 80%, but to reduce crash costs (reflecting injury severity) by around 90%.

Plans: to continue analyses of all traffic calming solutions used in Arkhangelsk and Arkhangelsk Region for improving awareness on traffic safety improvement.

4.4 Participation in discussion of civilized car and bicycle parking planning

In February 2008 members of the NP "Green Wave" took part in the seminar "Vehicle infrastructure development in Arkhangelsk". Representatives of the legislative and executive municipal power took part in the seminar.

The modern parking principals were suggested for Arkhangelsk. All the proposals were included in the Arkhangelsk city complex transport plan.

5 Dissemination of results to neighboring regions

23 April 2009 - participation in the Lecture Day in Arkhangelsk State Technical university "Traffic safety experience exchanged for occupied in transport infrastructure".

Target group: students and tutors (41 persons)

Presentation was made: "NGO role on traffic safety improvement. Experience of Swedish and Finnish traffic safety NGOs in traffic safety improvement.

26-28 April 2009 – participation in the conference "Improvement of accidents statistics system", Saint-Petersburg (in the framework of federal traffic safety programme 2006-2012)

Target group: universities, executive power representatives, road police, business (driving schools, technical stations), mass-media of the North-West Federal Okrug (100 persons)

Presentation was made: "NGOs activity for traffic safety improvement" (Swedish and Finnish experience was presented and the results of the project "Polar Traffic safety")

20 May 2009 – participation in the final international conference on "know-how" transfer, Arkhangelsk

Target group: representatives of the organizations involved in traffic safety from the Arkhangelsk, Murmansk, Vologodskaya regions, republics of Komi and Karelia, Permskiy Kray, Sweden, Finland (about 60 persons).

Presentation was made: "Activity and results of the WP5 Technical assistance to NP "Green Wave"

6 Other activity in the framework of the project

Members of the NP "Green Wave" took part in the following events aimed at traffic safety improvement:

June 2007 participation in organizing and realization of the International Traffic safety days in Arkhangelsk (8-10 June)

Objectives: promoting passive safety devices (information and education): reflectors, belts, chairs, hands-free

Target group: road users

October 2007 participation in the seminar "System of activity management in traffic safety sphere" (in the framework of the federal Traffic safety programme for 2006-2012), Saint-Petersburg

Presentation: "Partnership activity to meet traffic safety targets"

Target group; universities, executive power representatives, road police, business (driving schools, technical stations), mass-media of the North-West Federal Okrug (100 persons)

2009 activity on the improvement of the public transport system of Arkhangelsk together with the Association of road transport workers of the Arkhangelsk Region: seminars, PR, public control.