

24-hour Rest Areas in the Barents Region

Along Border Crossing Roads



MARS 2021

Summary

This work is a follow-up of the Joint Barents Transport Plan document.

The study presents an overview of current and planned 24-hour rest areas. It describes standard requirements in the different countries and suggests joint minimum requirements for 24-hour rest areas in the Barents region.

The report proposes suitable locations for new rest areas and presents good examples of design and content. A common situation report concerning security problems is given, as well as a description of the financing of 24h rest areas in the Barents region.

The Expert Working Group recommends that 26 new 24h rest areas are built along the prioritized roads in the Joint Barents Transport Plan.

The Expert Working Group recommends a higher focus on security, the needs of female drivers, winter climate-related challenges and charging stations for electric vehicles at 24h rest areas.

1 Content

2	INTRODUCTION	5
2.1	Mandate from BEATA	5
2.2	The United Nations sustainable development goals	6
2.3	Presentation of the Expert Working Group	6
2.4	Definitions and Clarifications	7
3	EXISTING REST AREAS	8
3.1	Number and services	8
3.2	The interactive map	10
4	REQUIREMENTS	12
4.1	Barents 24h rest area standard requirements	12
4.2	Norwegian 24h rest area standard requirements	12
4.3	Swedish 24h rest area standard requirements	13
4.4	Finnish 24h rest area standard requirements	13
4.5	Russian 24h rest area standard requirements	14
4.6	Challenges related to improper use of the 24h rest areas	14
4.7	Examples of good design and content	14
4.8	Norway	15
4.8.1	Typical commercial 24h rest area	16
4.8.2	Typical public 24h rest area	17
4.8.3	The newest and best 24h rest area	18
4.9	Sweden	20
4.9.1	Typical commercial 24h rest area	21
4.9.2	Typical public 24h rest area	22
4.9.3	The newest and best 24h rest area	23
4.10	Finland	25
4.10.1	Typical commercial 24h rest area	26
4.10.2	Typical public 24h rest area	27
4.11	Russia	28
4.11.1	Typical commercial 24h rest area	29
4.11.2	Typical public 24h rest area	31
4.11.3	The newest and best 24h rest area	32
4.12	Professional driving in the Barents area	33
4.13	The needs of female drivers	34
4.13.1	Personal safety	34
4.13.2	Services	34
4.14	New Technology	34
4.14.1	ITS pilot “24-hour rest areas”	34
4.14.2	Platooning	36
4.15	Fuel-development	36

5	NEED FOR NEW REST AREAS	37
6	THE SECURITY SITUATION	45
7	FINANCING	47
7.1	Financing overview	47
7.2	Financing of 24h rest areas in Northern Norway	49
7.2.1	Public financing	49
7.2.2	Partly public and partly private financing	50
7.2.3	Private providers of publicly financed services	50
7.2.4	Private funding	50
7.3	Financing of 24h rest areas in Northern Sweden	51
7.3.1	Public financing	52
7.3.2	Private financing	52
7.4	Financing of 24h rest areas in Northern Finland	53
7.4.1	Public financing	54
7.4.2	Private financing	54
7.5	Financing of 24h rest areas in Northern Russia	55
7.5.1	Public financing of all basic services	56
7.5.2	Private financing of additional services nearby	56
8	RECOMMENDATIONS	57
8.1	Recommendations for Barents measures	57
9	ATTACHMENTS AND REFERENCES	59
9.1	Attachments	59
9.1.1	Mandate from BEATA	59
9.1.2	Dialogue with key stakeholders and the transport industry	60
9.1.3	Female Northern Norwegian drivers' experiences and challenges	60
9.1.4	Female Northern Swedish drivers' experiences and challenges	61
9.2	References	62

2 Introduction

24-hour rest areas have a major impact on safety, as well as on the welfare of professional drivers. An Expert Working Group has developed this report. The report is submitted at the request of BEATA.

The background for this 24h rest area report is the goal and measures described in the draft Joint Barents Transport Plan. As freight transport by road is increasing in the Barents region there is an increasing need for safe and secure night rest facilities for drivers of freight transport vehicles. It is important that transports are safe,

clean, secure and efficient. Drivers' hours regulations require drivers of heavy vehicles to take breaks and to have sufficient resting time to achieve a normal sleeping period. Rested drivers are important for general road safety.



Map 1: Main transport routes in the Barents region. (Map: BEATA) ¹⁾

1) Rv93 has changed name to E45

2.1 Mandate from BEATA

Freight transport by road is increasing also in the Barents region. One of the recommendations in the Draft Joint Barents Transport Plan (JBTP) revised in 2019 is to develop more and better rest areas for the drivers of heavy goods vehicles.

- The Working Group shall be led by the Norwegian Public Road Administration
- The Working Group shall consist of representatives from the road or transport administrations in the Barents countries as well as representatives from the regional level.
- The work shall include dialogue with relevant organizations and stakeholders in the sector, hereunder trade unions.
- The Working Group shall:
 - o Point out the need for improvement of current rest areas.
 - o Propose suitable locations for new rest areas to provide good coverage on border crossing roads and appropriate driving distances between them.
 - o Present good examples of design and content
 - o Discuss the location of rest areas in connection with the development of infrastructure for sustainable energy for heavy goods vehicles
 - o Consider the need and possibilities for user information, surveillance and inspection for safe and secure usage of the rest areas. ITS solutions will be a part of these considerations.
 - o Provide a common situation report concerning security problems at rest areas in the region.
 - o Analyze costs and present a solution for the financing of these rest areas.
 - o Propose recommendations for development of rest areas along the border crossing corridors in the Barents region

2.2 The United Nations sustainable development goals

The UN's sustainable development goals are the world's joint work plan to eradicate poverty, fight inequality and halt climate change by 2030. There is a total of 17 important goals; we present four that we emphasise in this report.

- Goal 3: Ensure healthy lives and promote well-being for all at all ages.
- Goal 5: Achieve gender equality and empower all women and girls.
- Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all.
- Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation.

2.3 Presentation of the Expert Working Group

Based on the mandate the Expert Working Group is led by the Norwegian Public Roads Administration. The members are from the Barents countries, representing both road and transport administrations, as well as representatives from the regional level. During the working period the group had 6 Working Group meetings. All meetings were conducted via Skype.

EXPERT WORKING GROUP MEMBERS		
Name	Country	Organization
Ine Hilling (leader)	Norway	Norwegian Public Roads Administration
Evgeny Askoldovich Smirnov	Russia	Federal State Institution "Rosdormonitoring"
Igor Aleksandrovich Glazyrin	Russia	PKU Uprдор North-West
Sergey Alexandrovich Markov	Russia	Federal Administration of Road "Kola"
Sergey Nikolaevich Volnukhin	Russia	Federal Administration of Road "Kola"
Elena Denisova	Russia	Federal Administration of Road "Kola"
Ylva Lindström	Sweden	Swedish Transport Administration
Olivia Haggquist	Sweden	Swedish Transport Administration
Mikael Bergstrom	Sweden	Västerbotten County Administrative Board
Jaakko Ylinampa	Finland	Lapland Centre for Economic Development, Transport and the Environment
Jussi Huotari	Finland	Regional Council of Kainuu
Jari Gröhn	Finland	Finnish Transport Infrastructure Agency
Ingrid Kokkonen (2020.08-2020.12)	Secretariat	Norwegian Public Roads Administration
Ingviid Nylund (2020.12-2021.02)	Secretariat	Norwegian Public Roads Administration
Maria Haga (2021.01-2021.02)	Secretariat	Norwegian Public Roads Administration

2.4 Definitions and Clarifications

When talking about the individual countries we mean the part of the country affected by this project. We also use the phrase Northern, example Northern Sweden. Exceptions may occur.

When talking about rest areas, or just areas, we mean 24h rest areas.

A snow removal ramp is a device driver can climb onto to be able to remove snow with shovels from the container roof of their heavy vehicle.

3 Existing rest areas

188 registered 24h rest areas are identified in the Barents region. While Norway has only 10, the Russian Federation has 84. The standard varies very much. An online interactive map has been made, where details of each single 24h rest area are included and where analyses can be made.

3.1 Number and services

There is a total of 188 registered 24h rest areas in the Barents region. The average size of the 24h rest areas is 3 spaces for heavy vehicles²⁾.

- Proximately every second rest area can offer some form of hot food.
- Very few rest areas have kitchen facilities available for drivers.
- Fuel available at less than every third 24h area.
- Wi-fi available at one out of 10 24h rest areas.
- 42 rest areas have confirmed showers.

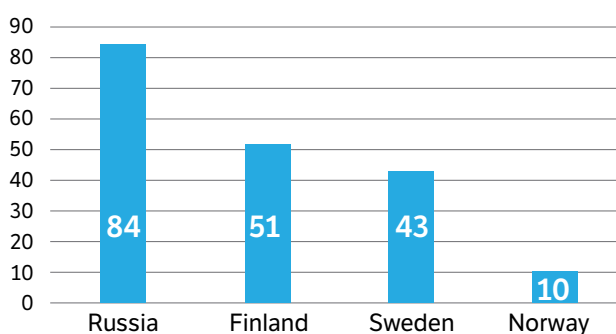
To be defined as a 24h rest area in this report, the rest area must fulfill some specific minimum criteria. You can read more about these criteria in chapter 4.1. This means that there can be other places to park along the main roads in the Barents region, but they are not included in this report because they do not meet the agreed criteria. Minimum requirements to be defined as a 24h rest area in this Report:

- Toilet
- Waste container
- Cleaning and supervision when needed
- Open all year around
- Parking spaces for heavy vehicles

A minimum standard and an acceptable distance between them will ensure drivers a minimum of hygienic, safe, and respectable working conditions. This in turn can help raise the attractiveness of this profession.

The 24h rest areas are divided between the countries as shown in the diagram below:

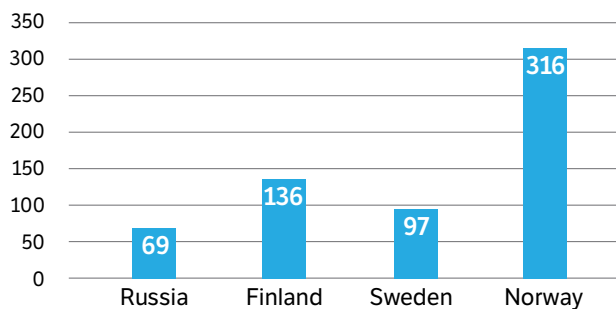
Number of existing 24h rest areas

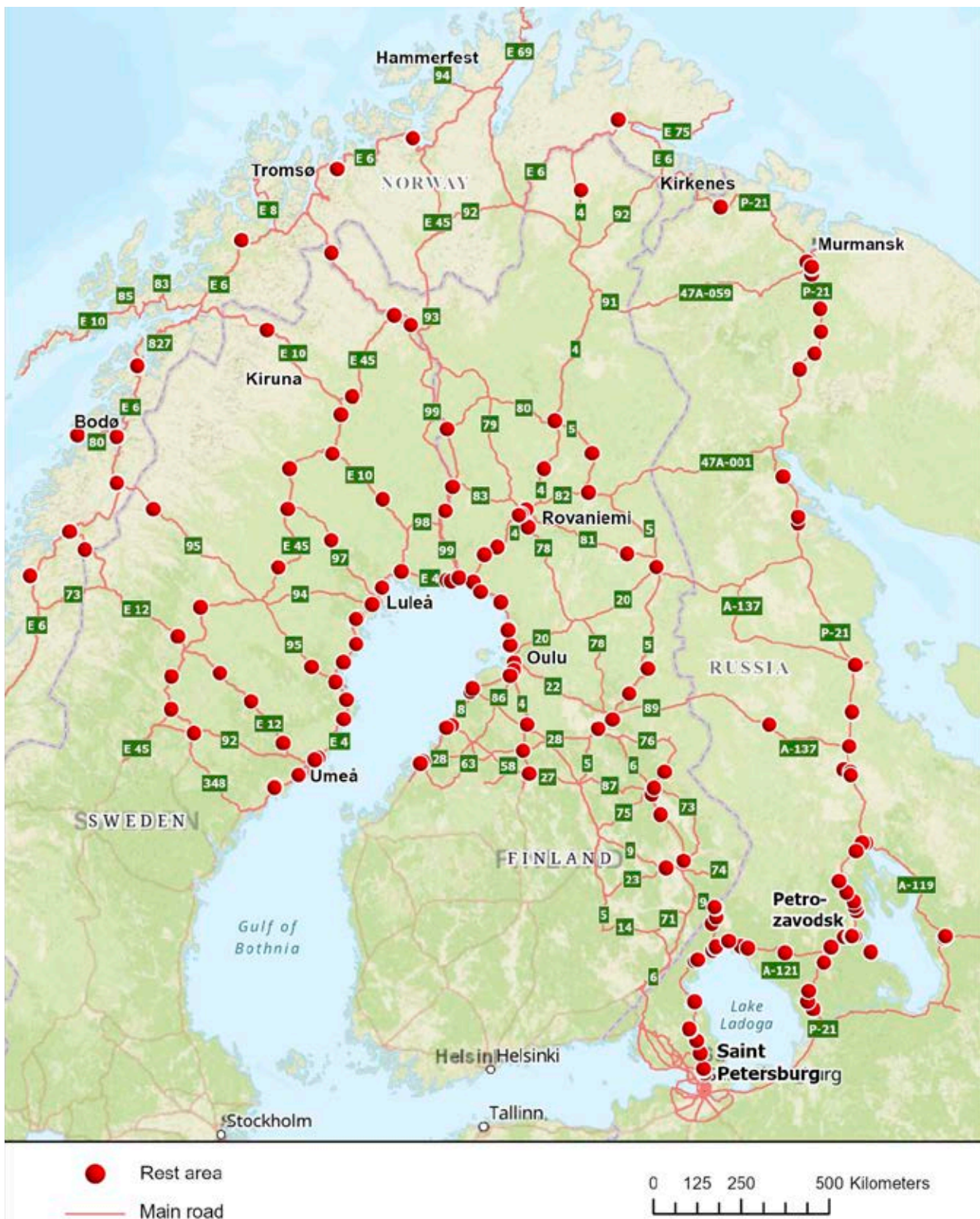


The statistics are based on the definition of a 24h rest area presented in this report.

The number of Russian 24h rest areas is higher than the total number in all the other three countries together. As shown on the map, Russia has a good density compared to the Scandinavian countries. The number of kilometers of road in Russia is lower than the total number of kilometers of road in the Scandinavian countries, so the table presents a quite accurate picture of the situation for drivers in the different countries. The same applies to comparison between the other three countries. A difference in road kilometers only explains a very small part of the difference in number of 24h rest areas.

Km per 24h rest area



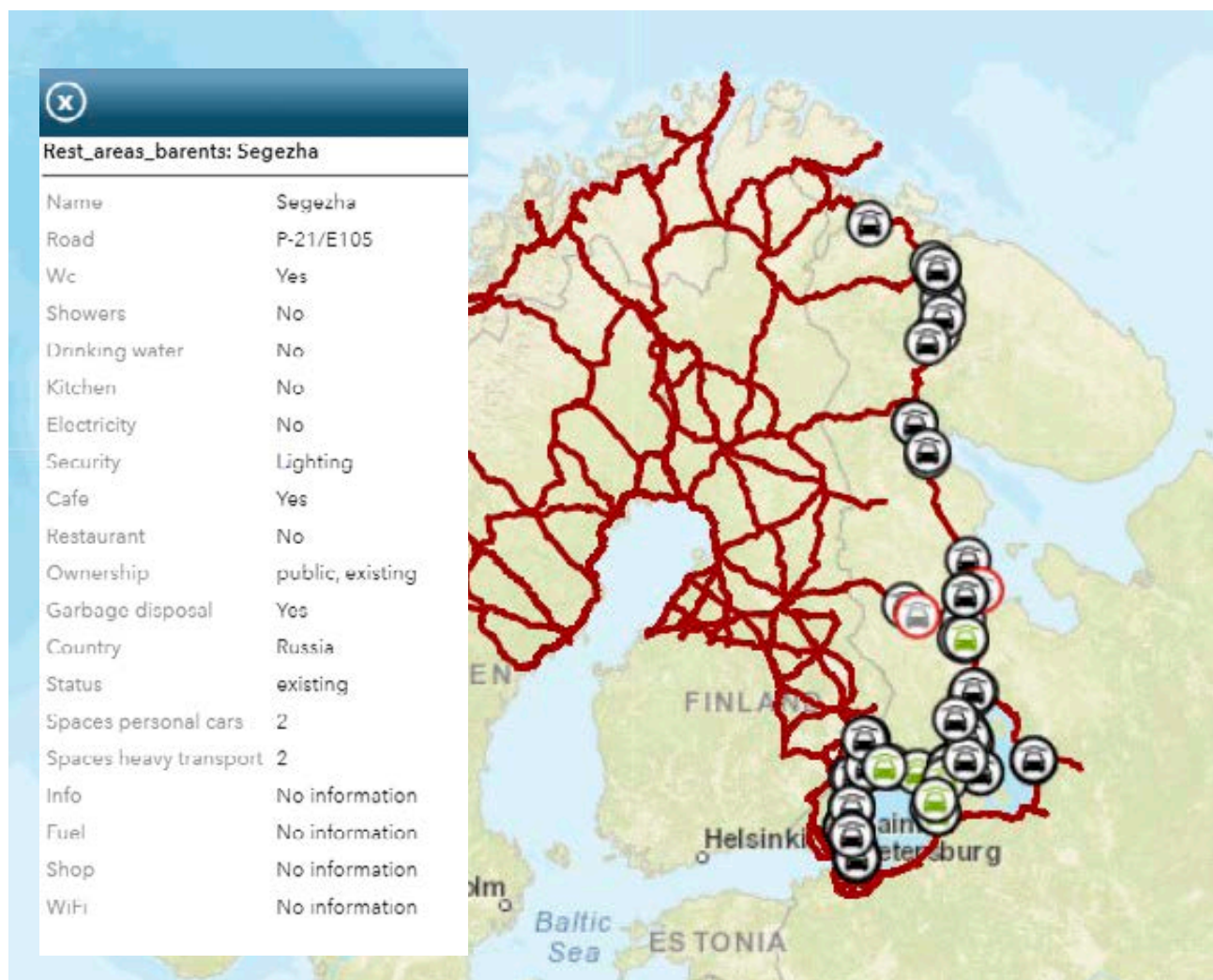


Map 2: The 188 current 24H rest areas in the Barents region

3.2 The interactive map

As a part of this work on 24h rest areas in the Barents region, a new online interactive map showing all 24h rest areas have been established. In the map, information on the minimum criteria is available as well as other information:

- Name of the 24h rest area
- Year of establishment
- Maintenance status
- Road number
- Coordinates (x,y)
- Number of parking spaces passenger cars
- Number of parking spaces heavy vehicles
- Toilet
- Shower
- Water (drinking water)
- Kitchen
- Electricity for refrigerated and freezer trucks
- Security
- Food
- Restaurant
- Ownership
- Garbage disposal
- Information about planned 24h rest areas
- Distance between 24h rest areas



Map 3: Example from the interactive map - Service at 24h rest area. This example is from rest area Segezha, Russia.

There are some differences between the four countries. As mentioned, Norway has without a doubt the lowest number of rest areas in the Barents region, 10 altogether. On the other hand, Norway has the most planned new areas. Sweden, Finland, and Russia all have a mix of public areas and privately funded areas, while in Norway private 24h rest areas with public subsidies are typical. In all countries, private areas are mainly built in connection with petrol stations. Altogether, if compared, there are huge variations between the 24h rest areas in the Barents region.

In the online interactive map, it is possible for the user to “click” different layers on/off, as well as to use search

filters and zooming. For example, you can choose to show the private areas only. In addition, you can see planned, not yet built 24h rest areas. The map will not be updated and shows the status in February 2021.

The maps presented in this report are images from the online interactive map.

The interactive map is available at this web address: <https://arcg.is/CS9ea0>

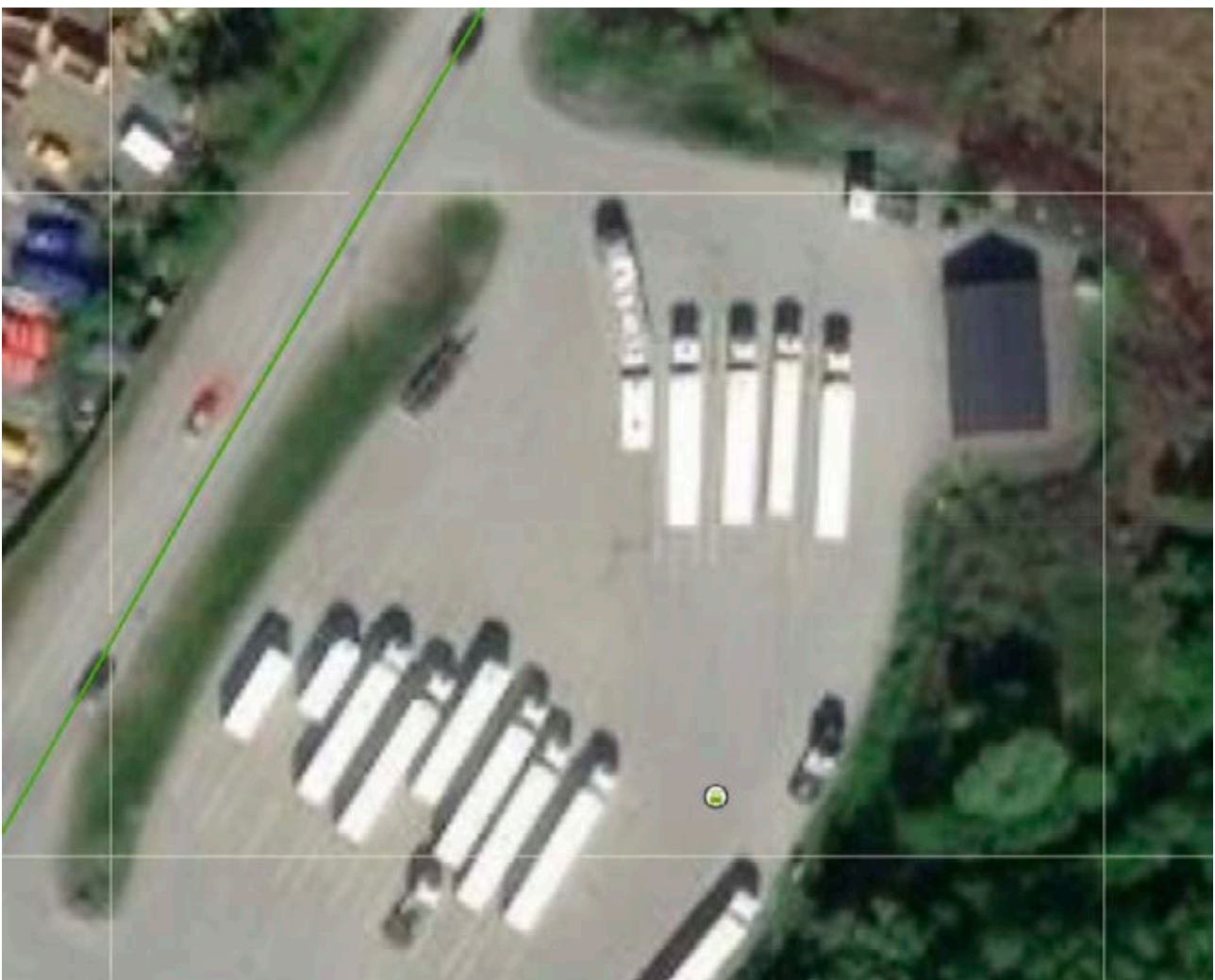


Figure 1: In the interactive map you can zoom and see satellite photos. This example is from Fauske 24h rest area.

4 Requirements

This study uses a joint definition of a 24h rest area. This joint definition is based on the different national requirements for 24h rest areas. The joint definition and national requirements are presented in this chapter. Some of the countries have formal requirements while others have more of an established practice. Some have minimum requirements and additional service options which are possible or recommended. The requirements also differ in their level of detail.

4.1 Barents 24h rest area standard requirements

The joint minimum service standard at 24h rest areas for heavy vehicles in the Barents region is defined by the Expert Working Group. The joint standard is based on and in accordance with national standards.

Minimum requirements

- Toilet
- Waste container
- Washing and supervision when needed
- Open all year around
- Parking spaces for heavy vehicles

Consideration should be given to whether separate toilets for women and men should be a requirement for status as a 24h rest area. In this report we have not set such a requirement. A requirement for waste containers and cleaning/supervision helps keeping the area clean.

4.2 Norwegian 24h rest area standard requirements

Minimum requirements

- Toilet with warm water for hand wash
- Shower
- Lighting
- Electricity for refrigerated and freezer containers for 25 % of the parking places
- Outdoor seating area
- Waste container
- Kitchen
- Lounge
- Cleaning and supervision minimum once a day

Additional options

- Grocery shop
- Cafeteria/restaurant
- Internet
- Fuel
- Car wash for trucks
- Ramps for drivers to remove snow on container roofs
- Cameras, surveillance, guards
- Secured area with gates and registration

The Norwegian list of minimum requirements is the longest. Norway is the only country where showers, electricity for refrigerated and freezer containers, kitchens and lounges are mandatory. When electricity is available, there is no need for vehicles to run their diesel aggregate while parking, which contributes to a healthier environment in the rest area and its surroundings.

4.3 Swedish 24h rest area standard requirements

Minimum requirements

- Toilet
- Seating area
- Parking space for truck, length 25.5 m
- Waste container
- Lightning
- National information and traffic information

Additional detailed requirements

- *In exceptional cases, dry toilets are acceptable after justification and approval.*
- *A seating group must be accessible for a person in a wheelchair.*
- *Toilet must be marked with either: Symbol for person with reduced mobility or sign for man and woman.*
- *Waste containers must be provided with a cover. Waste containers must be adapted to the requirements of the specific municipality.*
- *The information board must be placed at such a height that a person in a wheelchair can read the information.*
- *Vegetation that obscures the area must not dominate*
- *Parking space for car must be specified.*
- *Parking for truck with trailer must be specified.*
- *Parking space for truck with trailer must be located so that visibility from the road towards the rest area is maintained.*
- *Parking space for truck with trailer should be placed so that shading does not occur.*
- *Rest areas must be open and bright.*
- *There shall be no obscuring vegetation between the road and the rest area or in close proximity to rest areas.*

The Swedish additional requirement that toilet must be marked with symbol for person with reduced mobility, man or woman facilitates all people using the roads as an employee.

4.4 Finnish 24h rest area standard requirements

In Finland, 68 % of the 24h rest areas are private. There are no formal requirements for the private 24h rest areas. Despite this lack of formal requirements, they have a higher standard than the public ones.

The public 24h rest areas have formal standard requirements. There are two national categories for standard level: category 1 and category 2.

Minimum requirement Category 1s

- Toilet
- Parking space for heavy vehicles
- Waste container
- Table and chairs
- Lighting
- Information map
- waste and/or sewage system

Minimum requirement Category 2s

- Parking space for heavy vehicles
- Waste container
- Table and chairs
- Lighting
- Information map

The minimum level for category 2, which is the highest standard, does not include a toilet. In practice, however, public 24h rest areas in Finland do have toilets, with a few exceptions. There are a few cases where Finnish public 24h rest areas may have dry toilets or no toilet at all where water supply is unavailable. These cases are not included in our study.

4.5 Russian 24h rest area standard requirements

Minimum requirements

- Toilet
- Parking space for heavy vehicles
- Waste container
- Recreation pavilion
- Lighting

4.6 Challenges related to improper use of the 24h rest areas

Challenges with vandalism, soiling, long-term stays and undesirable use of the areas are mentioned in previous studies, by the members of the transport industry we have spoken to and the road administrations represented in the Expert Working Group. Such challenges are indeed an important issue even though they are not mentioned in the BEATA mandate. These challenges strongly affect the real availability of good overnight resting areas. If the 24h rest area in practice is unavailable -because of long-term parking, or parking by tourists,

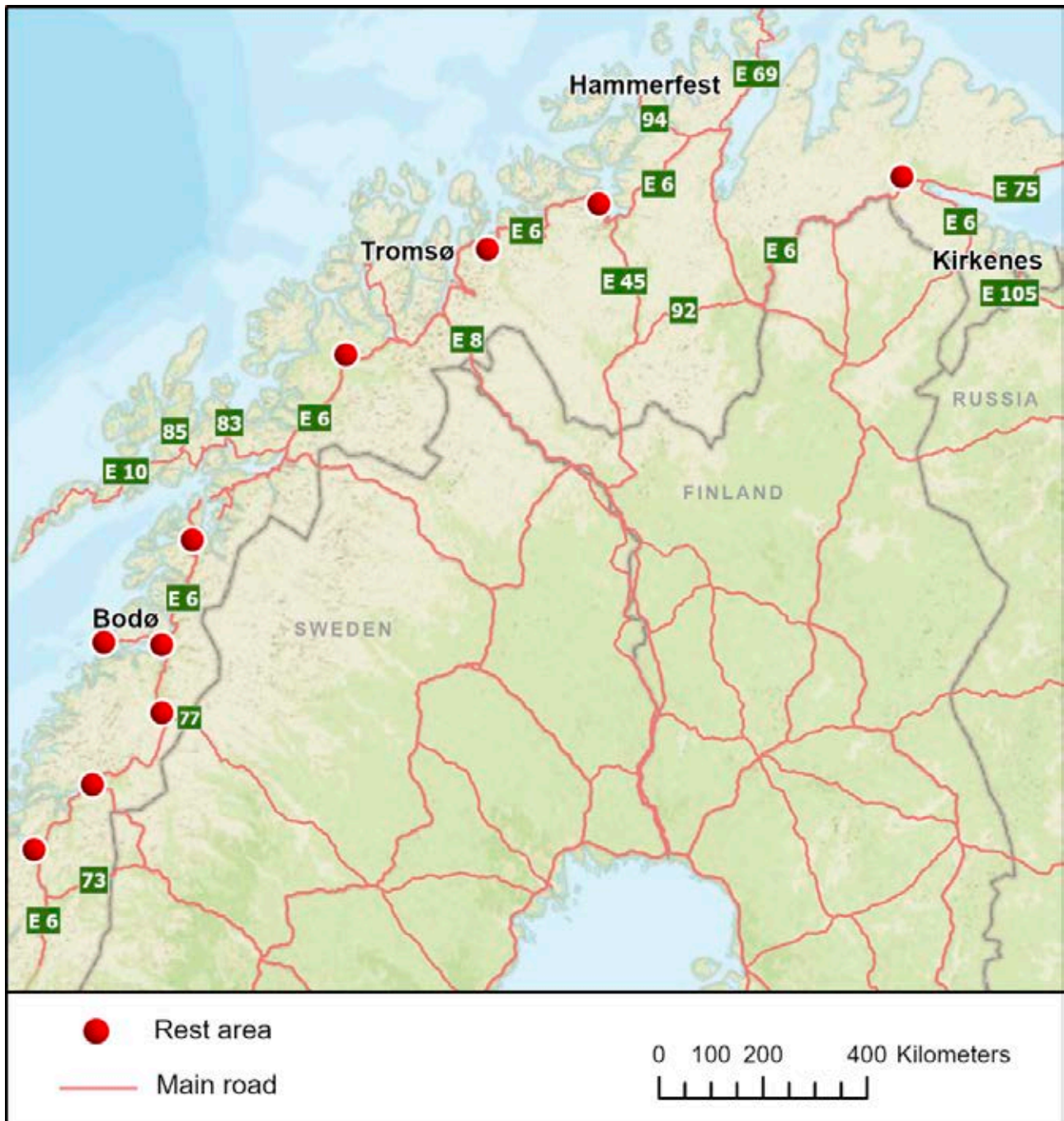
or unfunctional because of vandalism or unhygienic toilets - for the heavy vehicle driver this is the same as if the 24h rest area had not existed.

We have no indication that these types of challenges are larger or smaller in the Barents region than elsewhere.

4.7 Examples of good design and content

The Expert Group finds that the best way to describe the variety of design and content at 24h rest areas in the Barents region is by photo documentation. The design and contents of course vary by country, but there is also some development over time and some cases where a single or a few prioritized 24h rest areas have been given a higher standard than average/normal for the country and time of construction. In addition to typical 24h rest areas, we have therefore included some examples of “state of the art” 24h rest areas. The photo documentation selected for this report is a mix of overview photos, photos of detailed content, and summer and winter conditions at the rest areas.

4.8 Norway



Map 4: The 10 existing 24h rest areas in the Barents region of Norway

4.8.1 Typical commercial 24h rest area



Figure 2: Bukta 24h rest area, Norway. Notice the snow removal ramp. (Photo: Norwegian Public Roads Administration)



Figure 3: Talvik 24h rest area, Norway (Photo: Norwegian Public Roads Administration)

4.8.2 Typical public 24h rest area



Figure 4: Bodø 24h rest area, Norway (Photo: Norwegian Public Roads Administration)



Figure 5: Building with bathroom, kitchen, and lounge. Fauske 24h rest area, Norway (Photo: Norwegian Public Roads Administration)



Figure 6 & 7: Details from public 24h rest area, Norway (Photo: Norwegian Public Roads Administration)

4.8.3 The newest and best 24h rest area



Figure 8: Storjord public 24h rest area, Norway (Photo: Norwegian Public Roads Administration)



Figure 9: Storjord public 24h rest area, Norway (Photo: Norwegian Public Roads Administration)

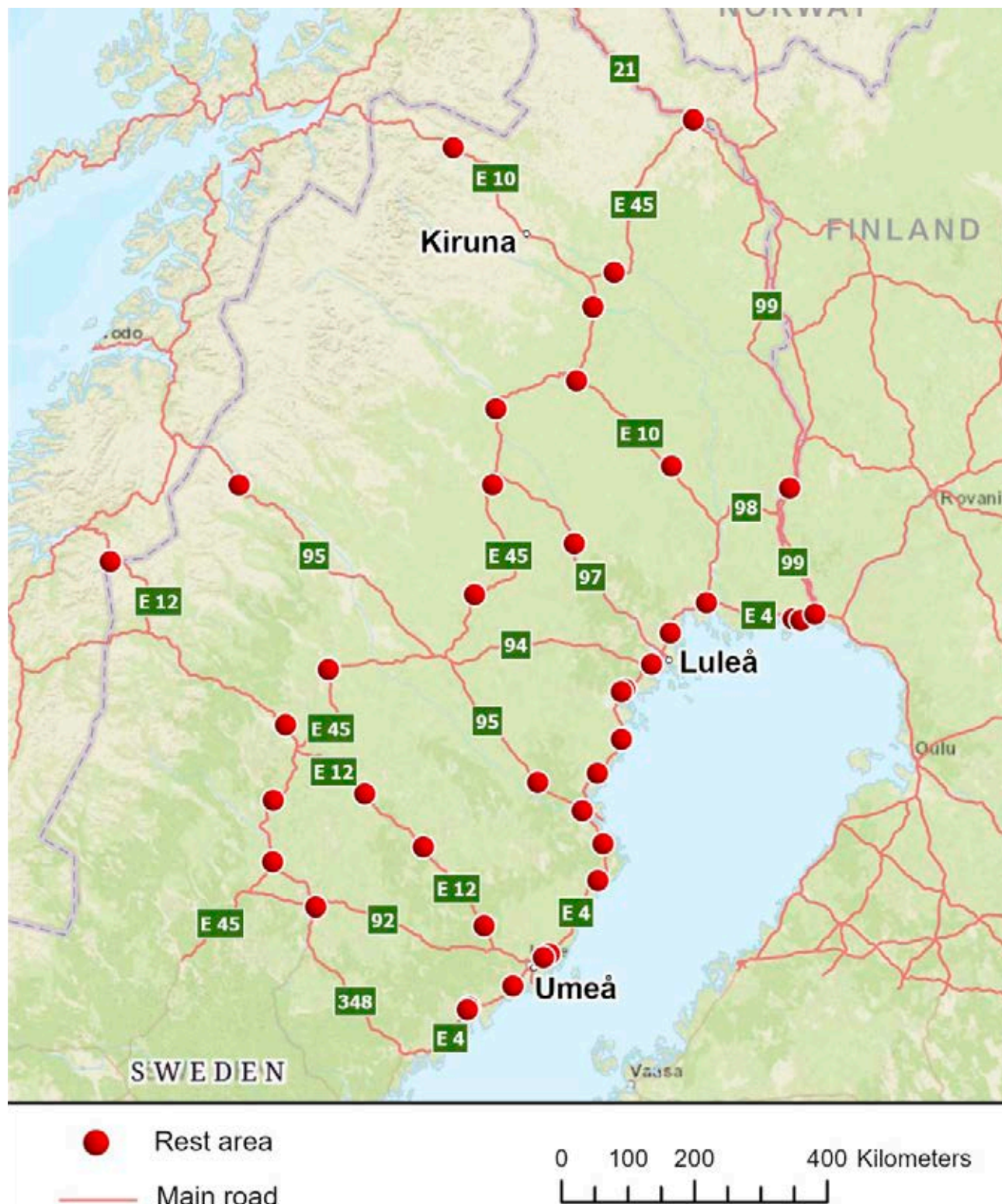


Figure 10: Kitchen. Detail from Talvik rest area, Norway (Photo: Norwegian Public Roads Administration)



Figure 11: Lounge. Detail from Talvik rest area, Norway (Photo: Norwegian Public Roads Administration)

4.9 Sweden



Map 5: The 43 existing 24h rest areas in the Barents region of Sweden

4.9.1 Typical public 24h rest area



Figure 12: Gas station at Cirkel K Persön (Photo: Swedish Transport Administration)



Figure 13: Parking area and garbage disposal at Cirkel K Persön (Photo: Swedish Transport Administration)



Figure 14: Entrance, gas station and restaurant at Måttsund rest area (Photo: Swedish Transport Administration)

4.9.2 Typical public 24h rest area



Figure 15: Sävar 24h rest area, Sweden (Photo: Swedish Transport Administration)



Figure 16: Sävar 24h rest area, Sweden (Photo: Swedish Transport Administration)

4.9.3 The newest and best 24h rest area

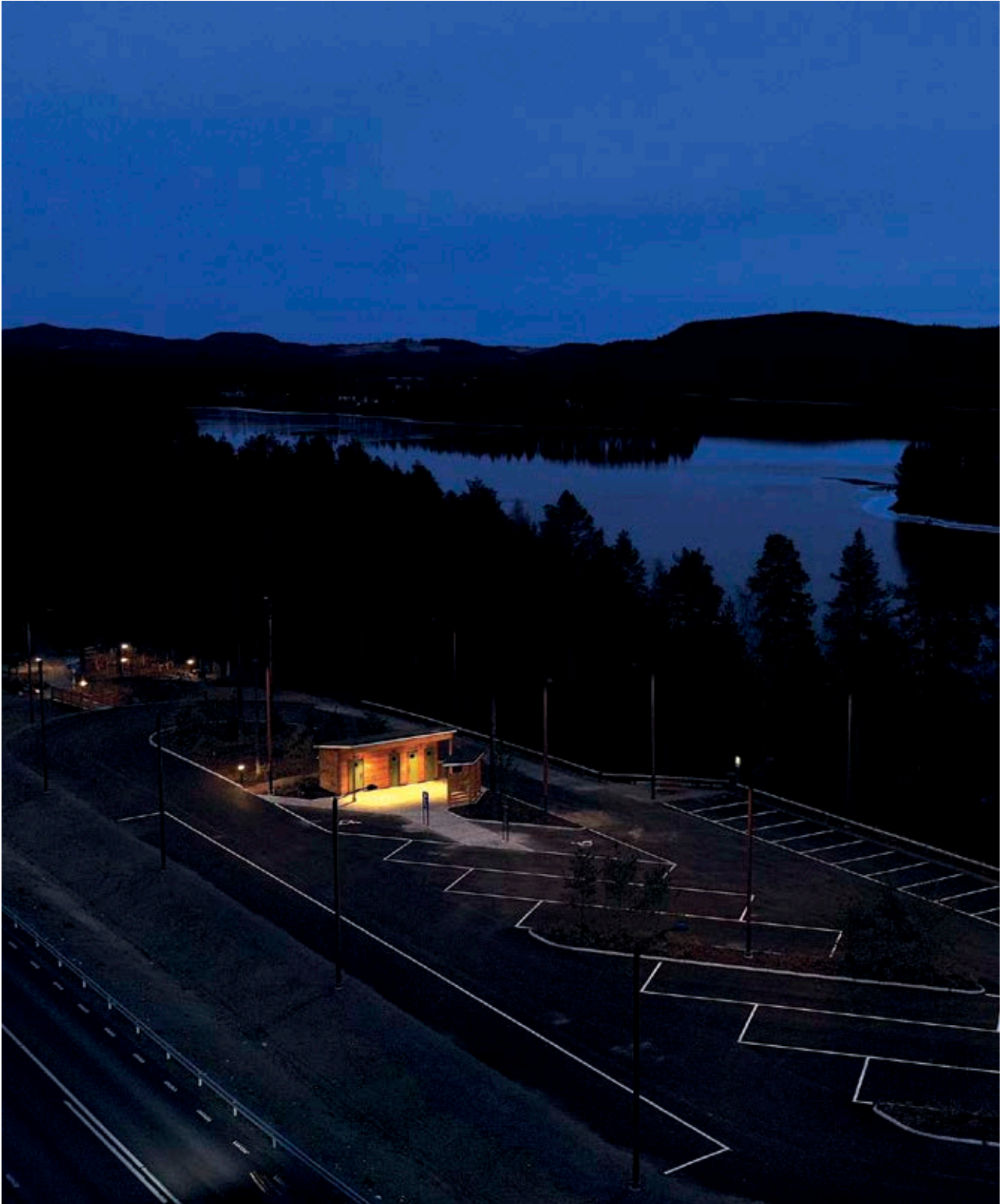


Figure 17: Bocksliden 24h rest area, Sweden (Photo: Tommy Olovsson).

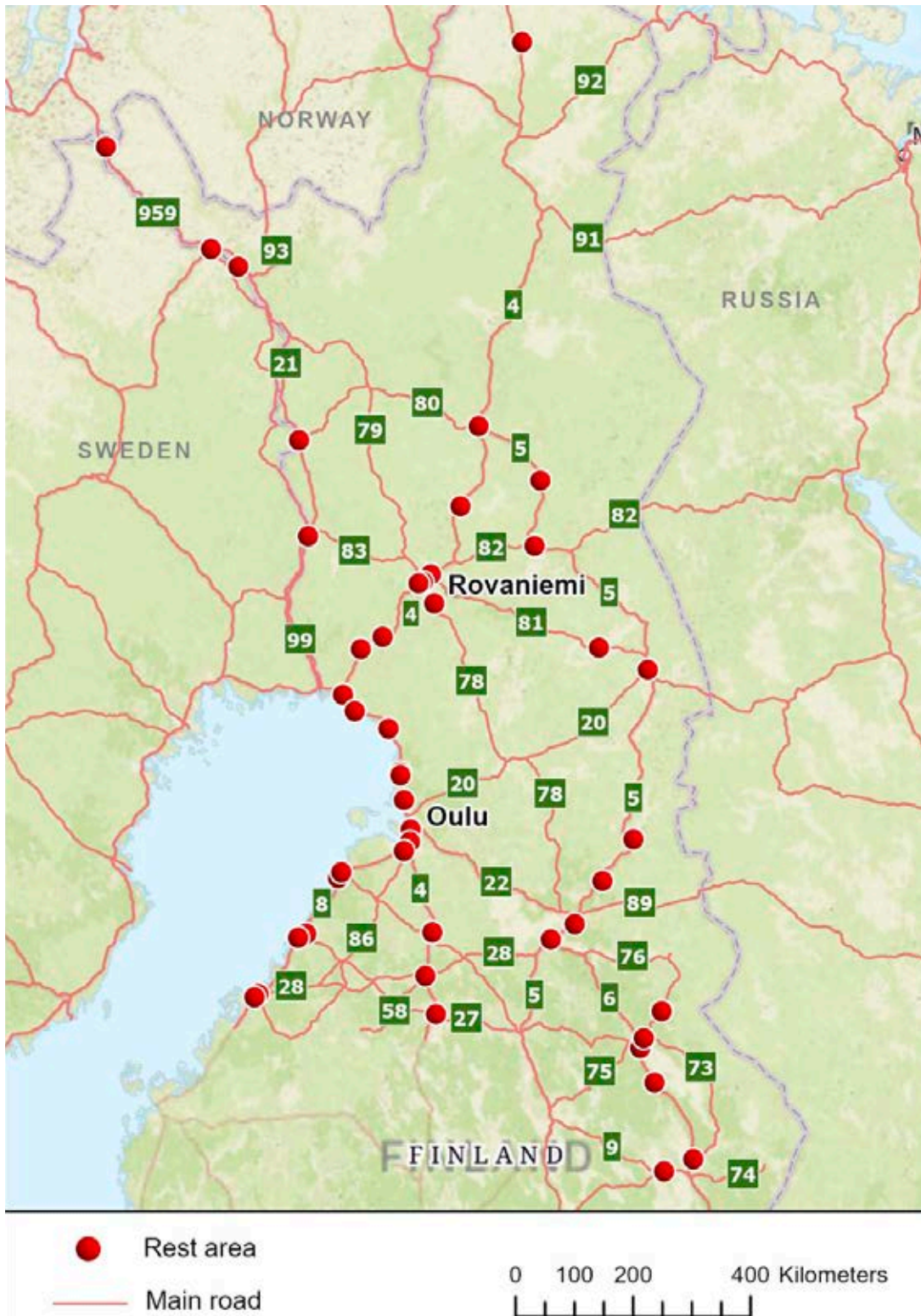


Figure 18: Detail from Bocksliden 24h rest area, Sweden (Photo: Swedish Transport Administration)



Figure 19: Detail from Bocksliden 24h rest area, Sweden (Photo: Swedish Transport Administration)

4.10 Finland



Map 6: The 51 existing 24h rest areas in the Barents region of Finland

4.10.1 Typical commercial 24h rest area



Figure 20: Highway 4, Napapiiri Arctic Circle 24h rest area, Finland (Photo: Lapland Centre for Economic Development, Transport and the Environment)



Figure 21: An example of best equipped 24h rest area in Finland. Notice the sign with Truck Point. (Photo: Lapland Centre for Economic Development, Transport and the Environment)

4.10.2 Typical public 24h rest area



Figure 22: Highway 4, Detail from Kuolajokilevähdys (Photo: Lapland Centre for Economic Development, Transport and the Environment)

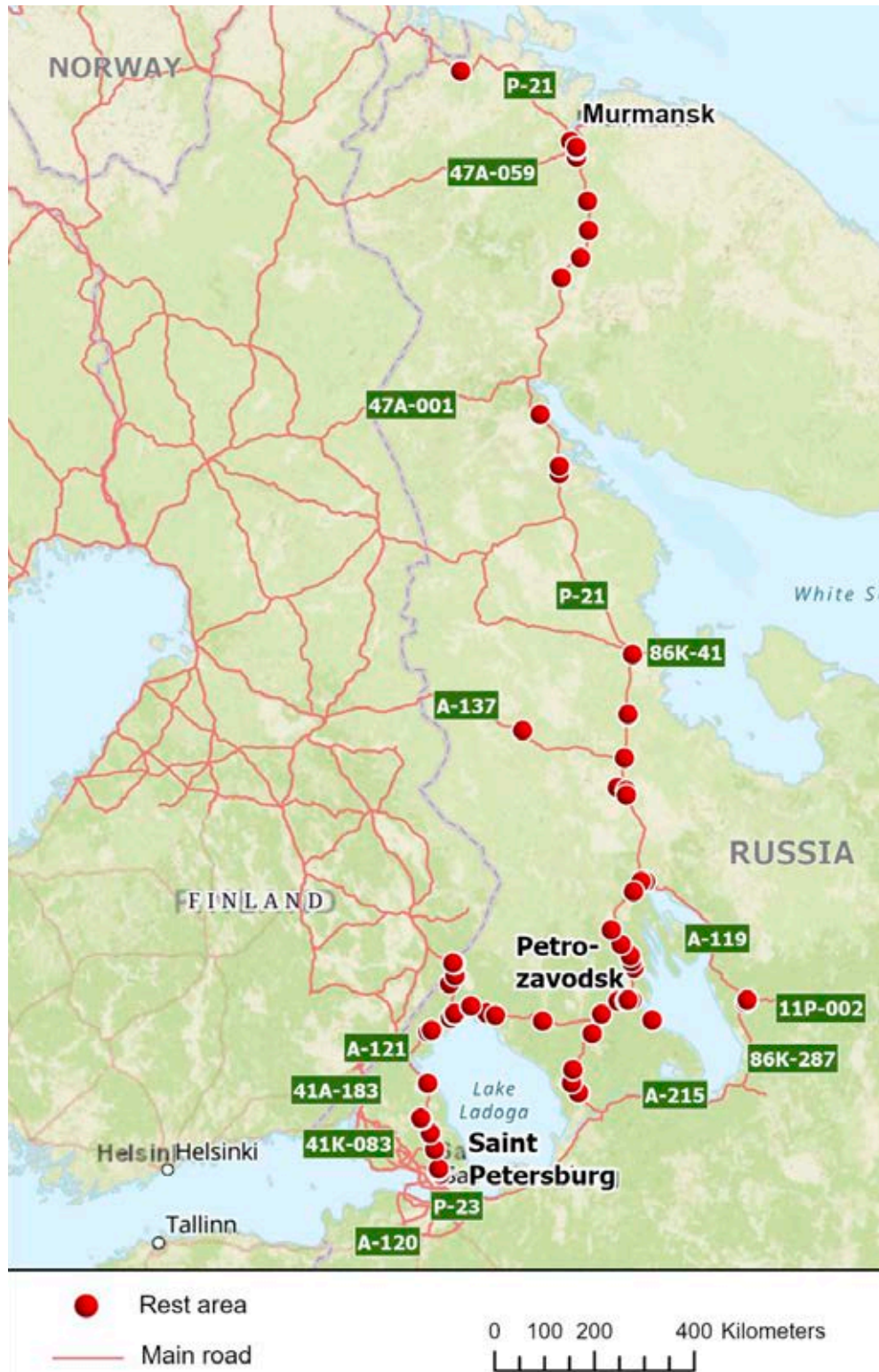


Figure 23: Detail from Alakorkalo, Rovaniemi (Photo: Lapland Centre for Economic Development, Transport and the Environment)



Figure 24: Highway 4, Kuolajokilevähdys (Photo: Lapland Centre for Economic Development, Transport and the Environment)

4.11 Russia



Map 7: The 84 existing 24h rest areas in the Barents region of Russia

4.11.1 Typical commercial 24h rest area



Figure 25: Highway P-21, Rosneft 24h rest area, Russia (Photo: Federal Administration of Road "Kola")



Figure 26: Commercial 24h rest area, Russia (Photo: Federal Administration of Road "North West")

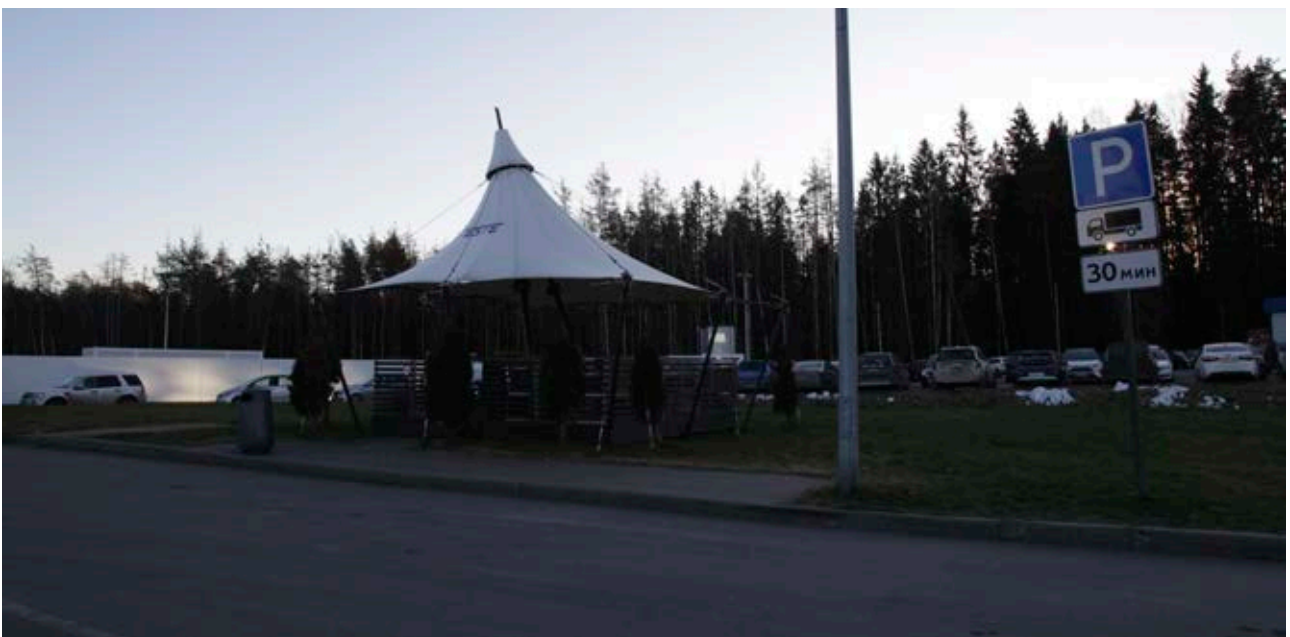


Figure 27: Commercial 24h rest area, Russia (Photo: Federal Administration of Road "North West")

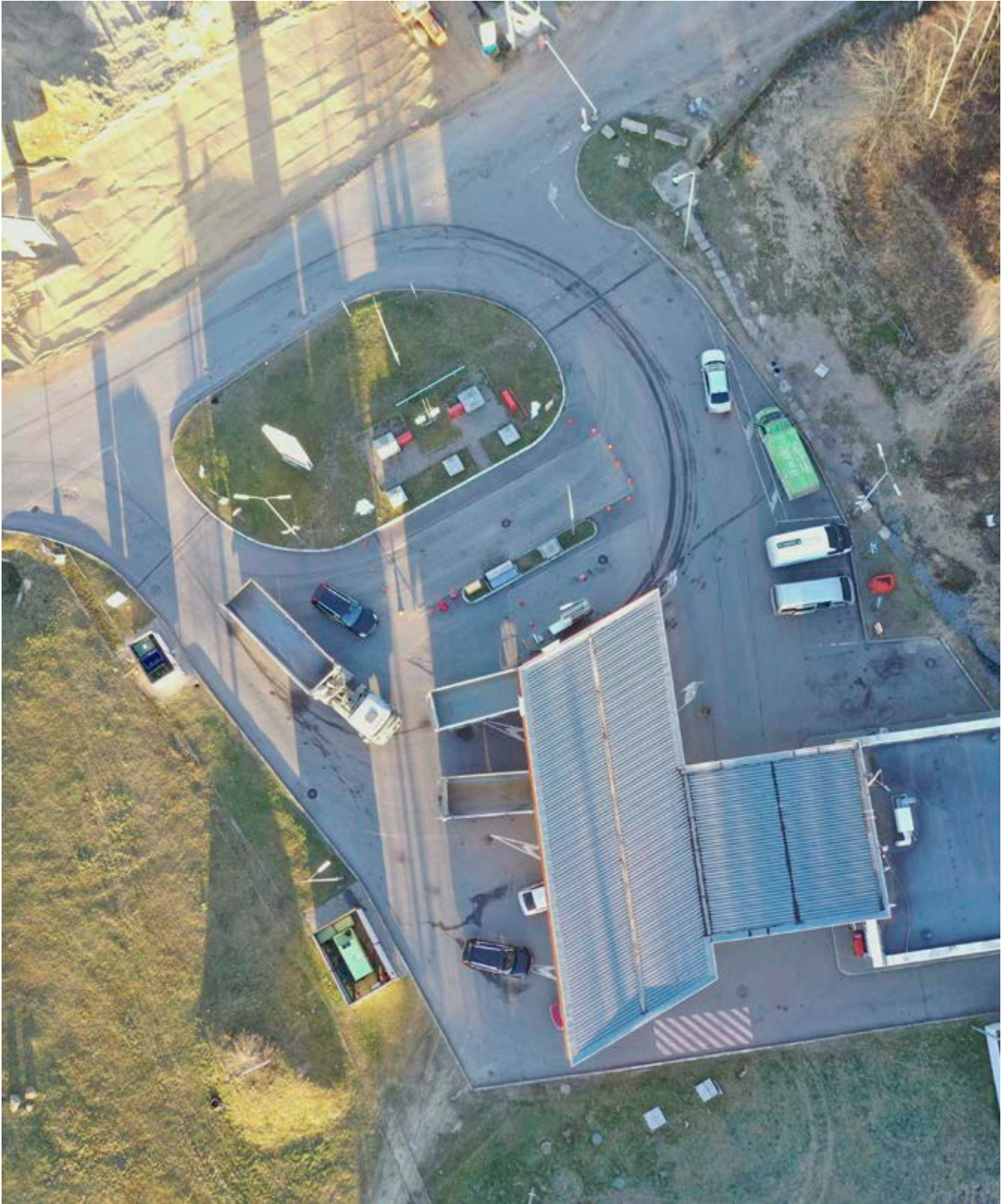


Figure 28: Commercial 24h rest area, Russia (Photo: Federal Administration of Road "North West")

4.11.2 Typical public 24h rest area



Figure 29: Highway P-21, Tuksha 24h rest area, Russia (Photo: Federal Administration of Road “Kola”)

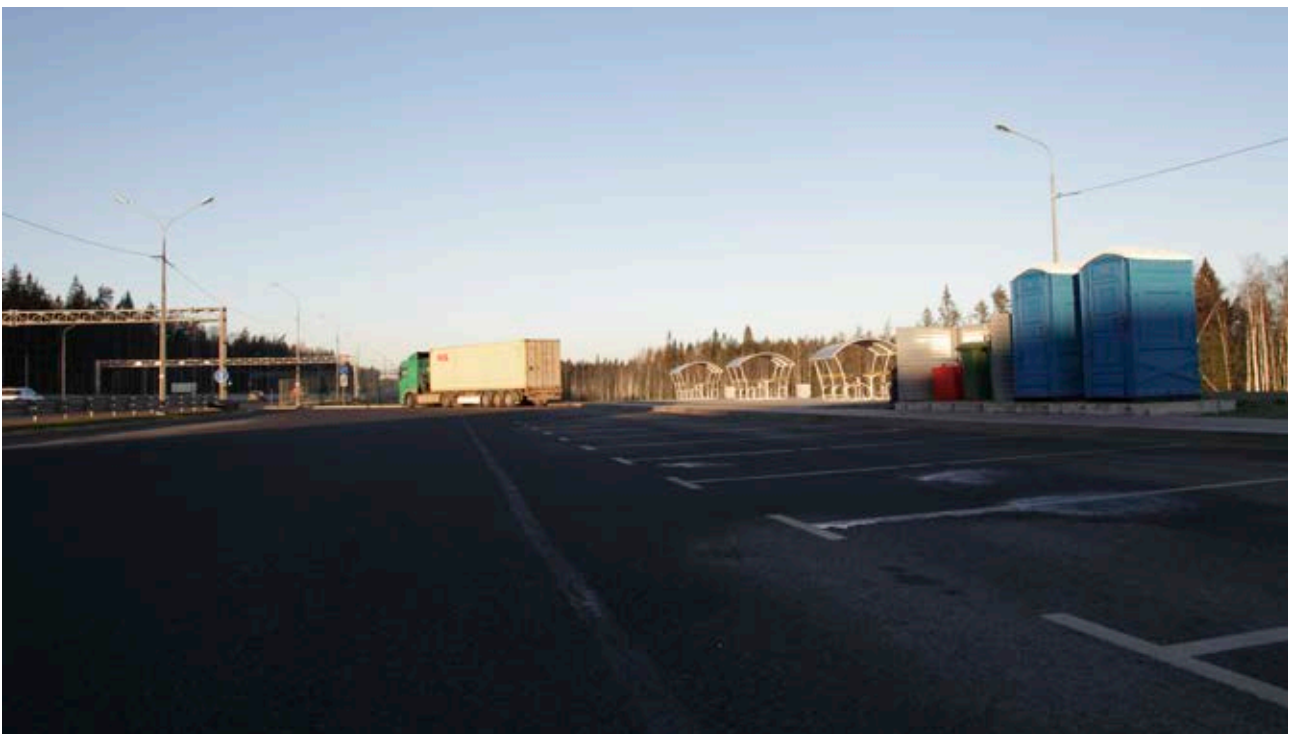


Figure 30: 24h rest area, Russia (Photo: Federal Administration of Road “North West”)

4.11.3 The newest and best 24h rest area



Figure 31: Footbridge connected to 24h rest area, Russia (Photo: Federal Administration of Road "North West")



Figure 32: Benches at 24h rest area, Russia (Photo: Federal Administration of Road "North West")



Figure 33: Highway A-119, Peshanoye 24h rest area, Russia (Photo: Federal Administration of Road “Kola”)

4.12 Professional driving in the Barents area

Freight transport is a worldwide activity. However, driving a heavy vehicle in the Barents region adds an extra level of challenge due to climate and weather conditions. The cold winter season represents difficulties for the drivers, and there is a need for other types of facilities in the rest areas here than further south. Examples of such facilities might be equipment for snow removal in the parking areas and winter isolated service buildings. During the driver's rest period a parked vehicle may be covered in snow, which poses a potential danger while driving. The Norwegian Truck Drivers' Association wishes to have snow removal ramps available in more rest areas than today.



Figure 34: Snow removal from a heavy vehicle in Buktamo, Norway. (Photo: Transport og Logistikkforbundet, Norway)

4.13 The needs of female drivers

Within the framework of this study, it has not been possible to conduct a representative survey of women's experiences and challenges. However, we have interviewed two female drivers in Northern Norway and one female driver in Northern Sweden³⁾. This subchapter presents an abstract of their stories. A more comprehensive report of their experiences and desires can be found in attachment 2. Their firsthand descriptions are supported by representatives of the national interest organization for professional drivers.

With regard to well-being at work, the female drivers we have spoken to highlight two topics: personal safety and an adequate access to toilets. For one of the drivers, the company she drives for considers the situation so unsatisfactory that the company insists that she stays at hotels when she has overnight transport assignments.

4.13.1 Personal safety

The working environment still has a huge predominance of men. Harassment from drivers from countries with less gender equality occurs, mainly in the form of gender discriminatory comments. Concerns are mentioned about being approached by drug-addicted petty criminals, as well as the theft of chains and taillights during the night by foreign colleagues. Insecurity can be so strong that female drivers in Norway have acquired and stored illegal personal defence equipment in the car. On the other hand, the female driver interviewed in Sweden had no concerns regarding her personal safety.

4.13.2 Services

Decent toilet facilities are reported to be non-existing in Norway and insufficient in Sweden. Female drivers need a high-frequency availability of simply clean and open toilets, not primarily high-quality toilets or toilets earmarked for women.

Unfortunately, experience shows that public toilets, even where they exist, are to a limited extent available in practice. Three challenges are highlighted; the toilets for road

users are closed (especially in winter), the rest area is not cleared of snow, or rest areas with toilets are occupied by tourists in the summer.

Women need toilets to a greater extent than men because every single toilet visit needs to be performed with an undressed lower body. In addition, the number of toilet visits is extra high during menstrual periods. Very little attention is given to these challenges. They are highly private for each individual driver. Some may even find them shameful. A reason why female drivers do not speak up more about these issues may be that they are a very small minority and women enter the male-dominated driving profession on men's terms.

4.14 New Technology

The design and content of new and existing 24-hour rest areas must consider the extremely fast technological development in society and transport.

4.14.1 ITS-pilot "24-hour rest areas"

The Expert Working Group has no information about any ongoing national technology initiatives for 24h rest areas. In the Barents region, however, there is one concrete pilot.

The Barents Regional Working Group on Transport and Logistics (BRWGTL) is working - in cooperation with BEATA - to realize the ITS ambitions outlined in the Joint Barents Transport plan. The work is part of, and funded through, the Kolarctic CBC project: Barents Region Transport and Logistics.

The two reports "Barents ITS" and "Green Transport" point to a lack of cross-border ITS-pilots with "seamless" flow of information between two or more countries in the Barents Region. "24-hour rest areas" is an ongoing ITS pilot for the winter of 2021 because of this recommendation for pilots. The goal of the pilot is to support BEATA's work to develop 24h rest areas.

As part of the ITS pilot, a cross-border web-solution will be developed and tested. Selected drivers will be able

to register their expected time of arrival, and in return get an automatic response with the percentage likelihood that there will be available spots at the rest area. 24h rest areas included in the pilot are Buktamo in Troms and Finnmark (Norway, 120 km from Tromsø) and Töre

in Norrbotten (Sweden, 60 km from Luleå). The regional and national levels, along with private and public partners, are participating in the pilot. At the present time, there are no online booking systems for 24h rest stop areas in the Barents Region.



Figure 35: The ITS pilot “24-hour rest areas, Töre 24h rest area (Photo: Barents ITS/ Capia AS)



Figure 36: Illustration from the App.

4.14.2 Platooning

A cooperation was established in 2018 between the Finnish company Ahola Transport Oyj and the Swedish company Scania to test semi-autonomous platooning formations with three or more connected heavy vehicles. During these tests, drivers man all heavy vehicles. However, the driver in the first vehicle controls the entire platoon and the following vehicles are driven autonomously. Ongoing technology development like platooning will affect road infrastructure development including 24h rest areas, but it is yet too soon to know in which way.

4.15 Fuel-development

The mandate brings up the issue of location of rest areas in connection with the development of infrastructure for sustainable energy for heavy goods vehicles. The Expert Working Group has found it difficult to conclude fully on this issue now because of an ongoing and extremely fast development when it comes to the implementation of fossil-free fuels and fuel distribution in all the Barents

countries. To give recommendations on density and locations of fuel stations at 24h rest areas has therefore proven difficult for the Expert Working Group.

If such a task should be performed one would have to considering the exploding innovation within the field of greener transport, the market shares of the different fossil-free fuels and the public sector's responsibility when it comes to promoting a more climate friendly transport sector. One possible development is that today's petrol stations will offer fossil-free fuels in the future, in response to the demand for greener transport.

Petrol stations⁴⁾ will however only be an option when filling takes no longer than the current diesel filling. This is the case for hydrogen, battery replacement or possibly new supercharging solutions for heavy vehicles. For battery electric vehicles, it is initially likely that you will have to use the places where the heavy vehicles stop anyway. They can supercharge 20-45 min while they are loading/unloading cargo or have a break. They can charge slowly overnight (for example in 24-hour rest areas).



Figure 37: From the Alhoa 400 km. test in Northern Norway October 2020 (Photo: Øystein Skotte)

5 Need For New Rest Areas

There is a need for new 24h rest areas, since many driving distances between the existing ones exceed 150 km, or an approximate two-hour drive.

Lack of satisfactory rest areas is a major problem as it may force drivers of heavy vehicles to park anywhere or even drive much longer than is recommendable.

Planned rest areas will fill some gaps, but it is important to remember that neither are all these ready to be built, nor have they been financed. Proper rest areas along the roads will help to improve working conditions for drivers of heavy vehicles.

The map made for this project, showing every 24h rest area in the Barents region, has uncovered gaps in the

coverage. There is a need to build new rest areas, to make sure drivers of heavy vehicles can find a place to stop and rest. By building new 24h rest areas somewhere close to the locations in the table, drivers of heavy vehicles will never be further than 150 km from a suitable rest area. Some new areas are already planned, and all of these have also been entered in the table. Not all of these have financing yet or are needed to fill the coverage gaps.

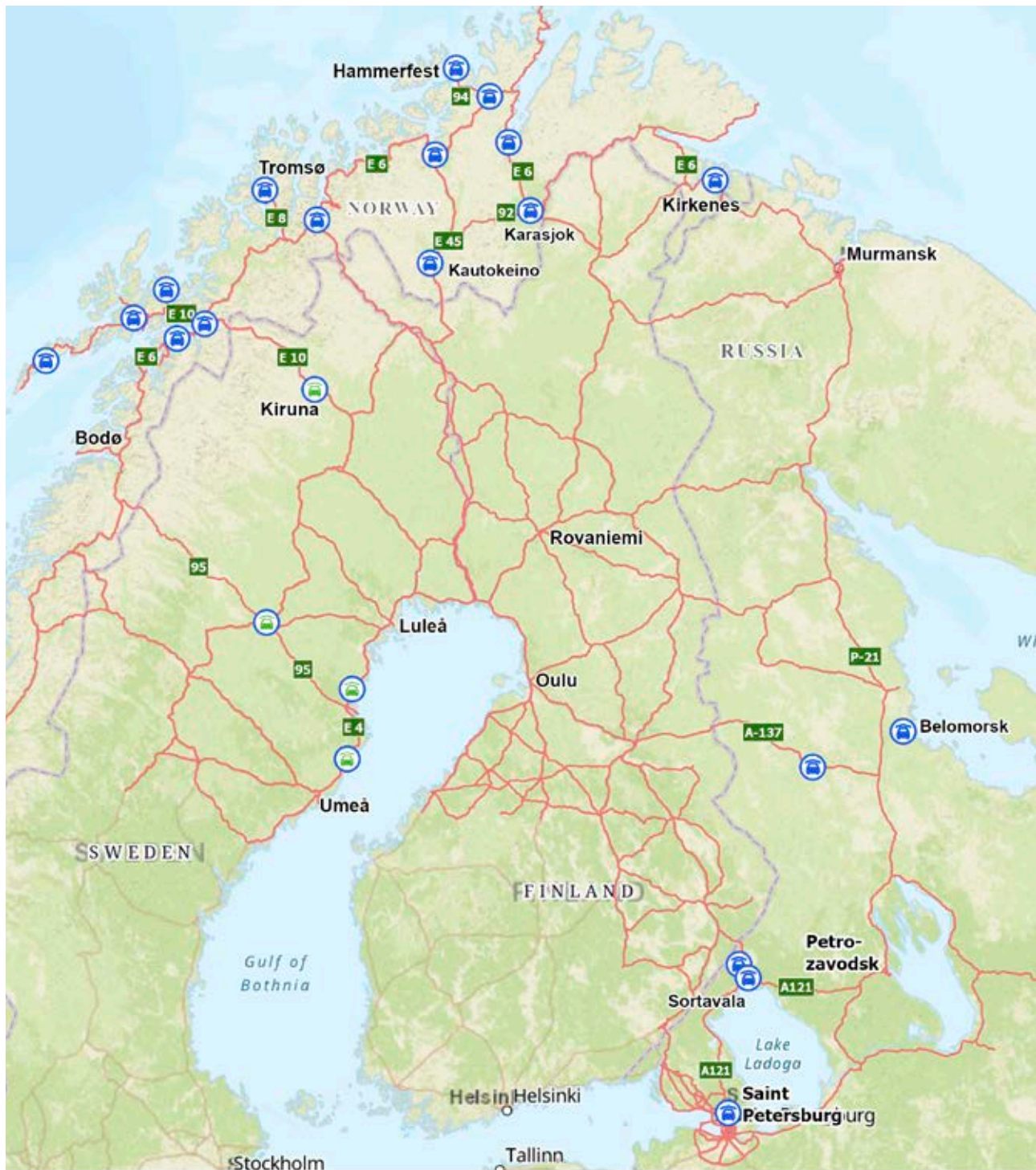
Adding colour codes relating to distance to the nearest existing rest area reveals unacceptable distances between rest areas in many cases. The acceptable distance is defined as 150 km. We do not distinguish between public and private 24-hour rest areas in these colour codes.





Figure 38: Parking sign for heavy vehicles. (Photo: Norwegian Public Roads Administration)



Map 8: Distance between 24H rest areas in the Barents region, coded in different colors.



Planned rest areas

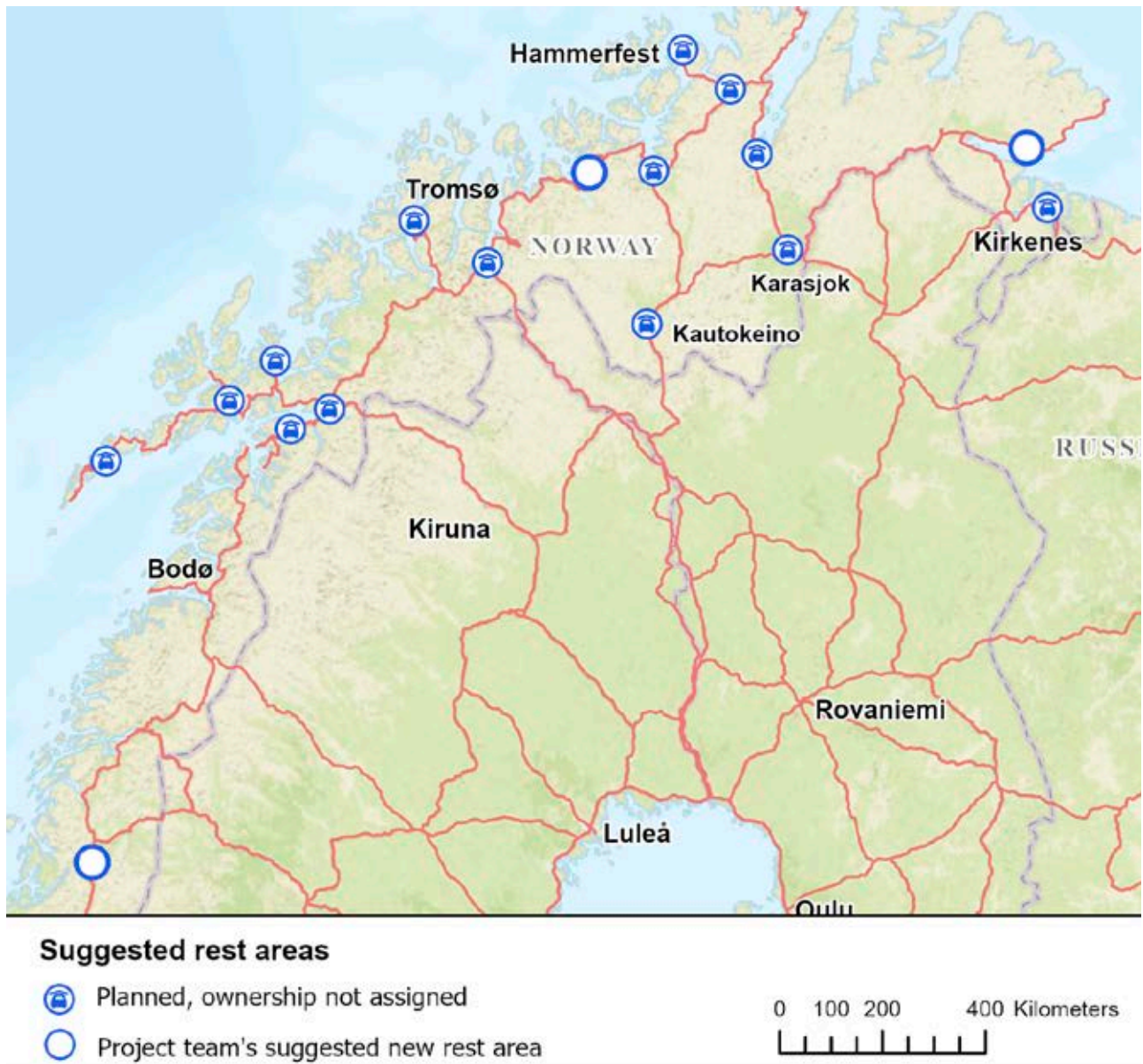
-  Ownership: public
-  Ownership not assigned

0 125 250 500 Kilometers

Map 9: The 23 planned 24h rest areas in the Barents region

RECOMMENDED NEW 24H REST AREAS			
Norway	Sweden	Finland	Russia
Ballangen (planned)	Kiruna (planned)		Pavilion Belomorskiye Petroglify (Planned)
Narvik/Bjerkvik (planned)	Granberget (planned)		Tiksha (planned)
Harstad (Planned)	Byske S (planned)		Guest complex Vremena goda (planned)
Skibotn (planned)	Arvidsjaur (planned)		Waterfall Ahvenkoski (planned)
Skaidi (planned)			Petrol station (Planned)
Lakselv (planned)			
Karasjok (planned)			
Kirkenes (planned)			
Tromsø (planned)			
Alta (planned)			
Kautokeino (planned)			
Hammerfest (planned)			
Gullesfjordbotn (Planned)			
Leknes (planned)			
Vasselv (Extra)			
Burfjord (Extra)			
Vadsø (Extra)			
17 new 24h rest areas	4 new 24h rest areas	0 new 24h rest areas	5 new 24h rest areas

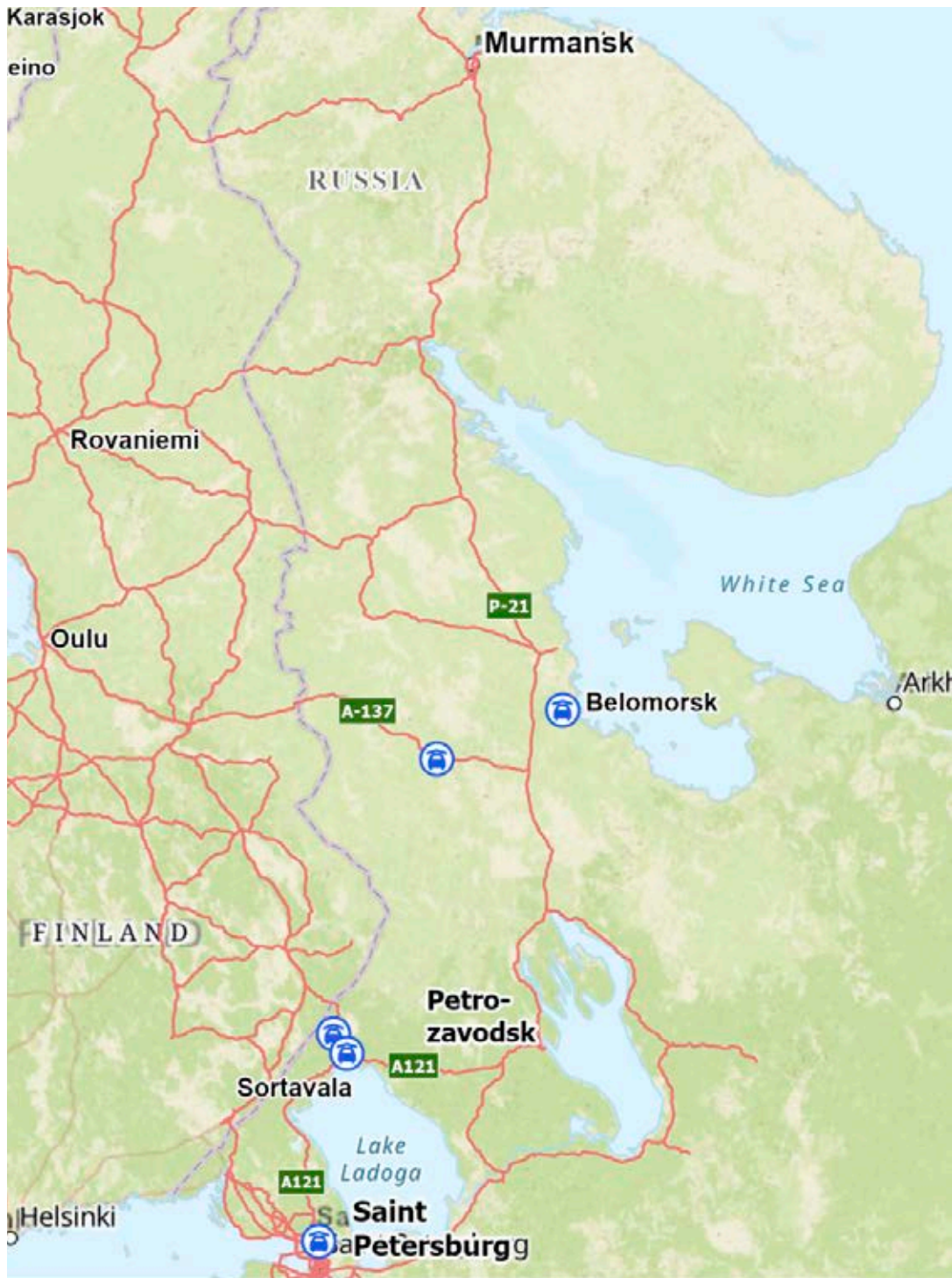
In total 26 new rest areas.





Map 10: Recommended 17 new 24h rest areas in Northern Norway




Map 11: Recommended 4 new 24h rest areas in Northern Sweden



Suggested rest areas

-  Planned, ownership not assigned
-  Project team's suggested new rest area

0 100 200 400 Kilometers



Map 12: Recommended 5 new 24h rest areas in Russia



Figure 39: Highway 932, Vietonen in Finland. (Photo: Lapland Centre for Economic Development, Transport and the Environment)

6 The Security Situation

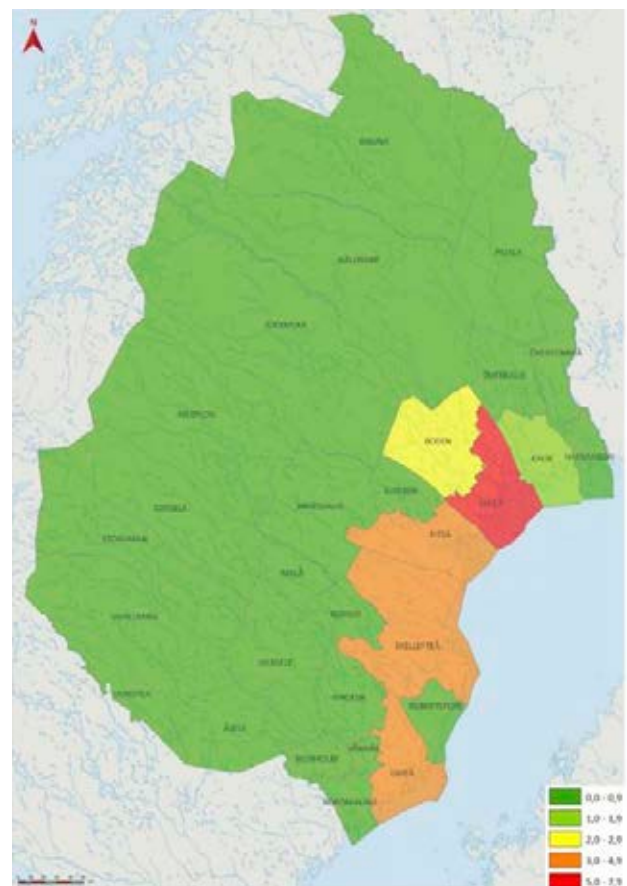
Very little information is available about the security situation. As far as the Expert Working Group is aware, the situation is acceptable, but due to globalisation this may change in the future. With a view to gender equality in the transport sector, where there has been an increase in the number of female drivers in recent years, a minimum of safety is required.

The Expert Group's work has revealed that there is generally little concrete information and statistics on crime in 24h rest areas. This applies in all four countries. Based on this, it has been somewhat difficult to find information regarding crime in 24-hour rest areas in the Barents region. The following findings are largely based on information obtained from the police. We will also refer to some results from a survey conducted among drivers in Norway in 2012.

According to the police, they receive hardly any reports of criminal acts in 24h rest areas in the Barents region. This applies to all four countries. As far as they could tell, most criminal actions in 24h rest areas take place in more heavily populated areas, for example closer to the capital. The most common type of crime seems to be theft of fuel from the heavy vehicles.

But even in the Barents region there are some grey zones: incidents that may be related to criminal activity, but not necessarily so. The Norwegian Public Roads Administration receives information about transshipment and exchange of semi-trailers that may be related to illegal cabotage. It also regularly receives notifications of drivers who apparently take their weekly rest living in their vehicle, which - if true - is an illegal act. In Northern Finland crimes/thefts at 24h rest areas are rare. A typical crime is to fill the tank at a petrol station with fuel without paying. Theft of cargo is extremely rare.

A study by the European Commission in 2019 showed a need for a common European classification system for safety and security of 24h rest areas in Europe.



Map 13: The average number of thefts from cargo vehicles per year between the 2014 and 2018 in the municipalities in the Swedish part of the Barents Region. Note that this might also include trains and other vehicles. Source: The Swedish National Council for Crime Prevention.

Northern Norway

Safety measures at 24h rest areas should be given priority. Regardless of the low risk of being exposed to criminal actions in the 24h rest areas, the risk is always there. A survey conducted in 2012 by the Norwegian Truck Owners Association shows that only 22% of Norwegian owners of heavy vehicles perceive Norwegian 24h rest areas as safe, regardless of region. However, according to the survey, it is in the eastern and southern part of Norway that criminal activity takes place. Even with low risk, it feels more secure to park in a place with good safety measures, which in turn contributes to better working conditions for drivers of heavy vehicles. Safety measures will also reduce the risk of vandalism etc. at the rest areas.

Northern Sweden

No research or statistics have been found that could tell how widespread the security problem at rest areas in Northern Sweden is. The available data that can give some hint of the problem are the police reports on thefts from cargo vehicles in general. These reports can show in which municipality a crime took place and include all types of cargo transport vehicles including trains. The data shows that in Sweden the biggest problem with theft from cargo vehicles is in the major cities; the bigger the city the bigger the problem seems to be. In the north, the largest concentration of population is by the coast and that is where we see a higher number of thefts than in the rest of the region where there are few reported crimes (see map on previous page).

Based on the data on reported thefts, together with dialogue with the police and representatives from the transport industry, the conclusion is that crimes at 24h rest areas are not a big security problem in Northern Sweden for drivers of heavy vehicles.



Figure 39: Sign explaining the rules at Buktamo, Norway. All drivers of heavy vehicles must identify themselves at the gate. The area is under video surveillance. (Photo: Norwegian Public Road Administration)

7 Financing

Overall, the 24h rest services for professional drivers in the Barents region are financed by a mix of private and public funds.

In general, the national governments finance a number of 24h rest areas with basic services. The basic public funded services are supplemented by privately financed services, at or near the public rest areas. In Finland, and along roads in Sweden with heavy traffic, completely private 24h rest areas are found, but completely private 24h rest areas are the exception in Barents

7.1 Financing overview

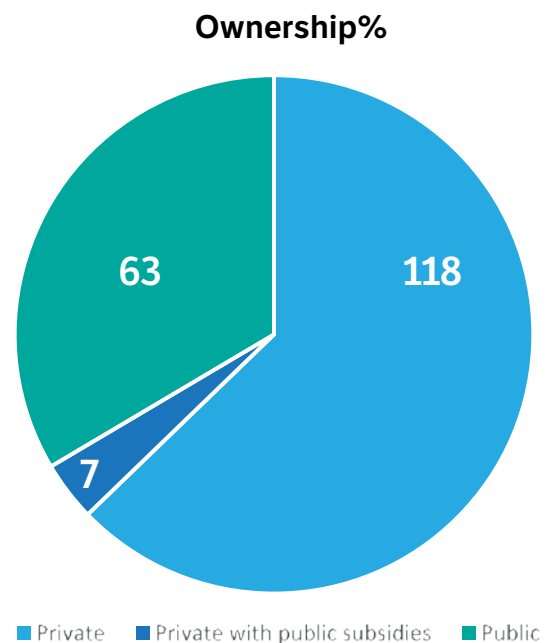
There is a clear difference between the countries, in that it seems that the national government takes responsibility to a larger extent in Norway and Sweden and to a lower extent in Finland. Russia is in between, with the national government taking responsibility for a basic/minimum service level everywhere.

The Norwegian national government takes extended responsibility for the rest area services, which in Norway include a higher overall standard with both kitchen facilities and showers, but only in theory. 24h rest areas in Norway are planned according to defined standards and long-term plans, but funds are not being made available in annual budgets to build the planned 24h rest areas, or to enter into agreements with private contractors to deliver such services.

The table below shows the number of privately versus publicly financed 24h rest areas.

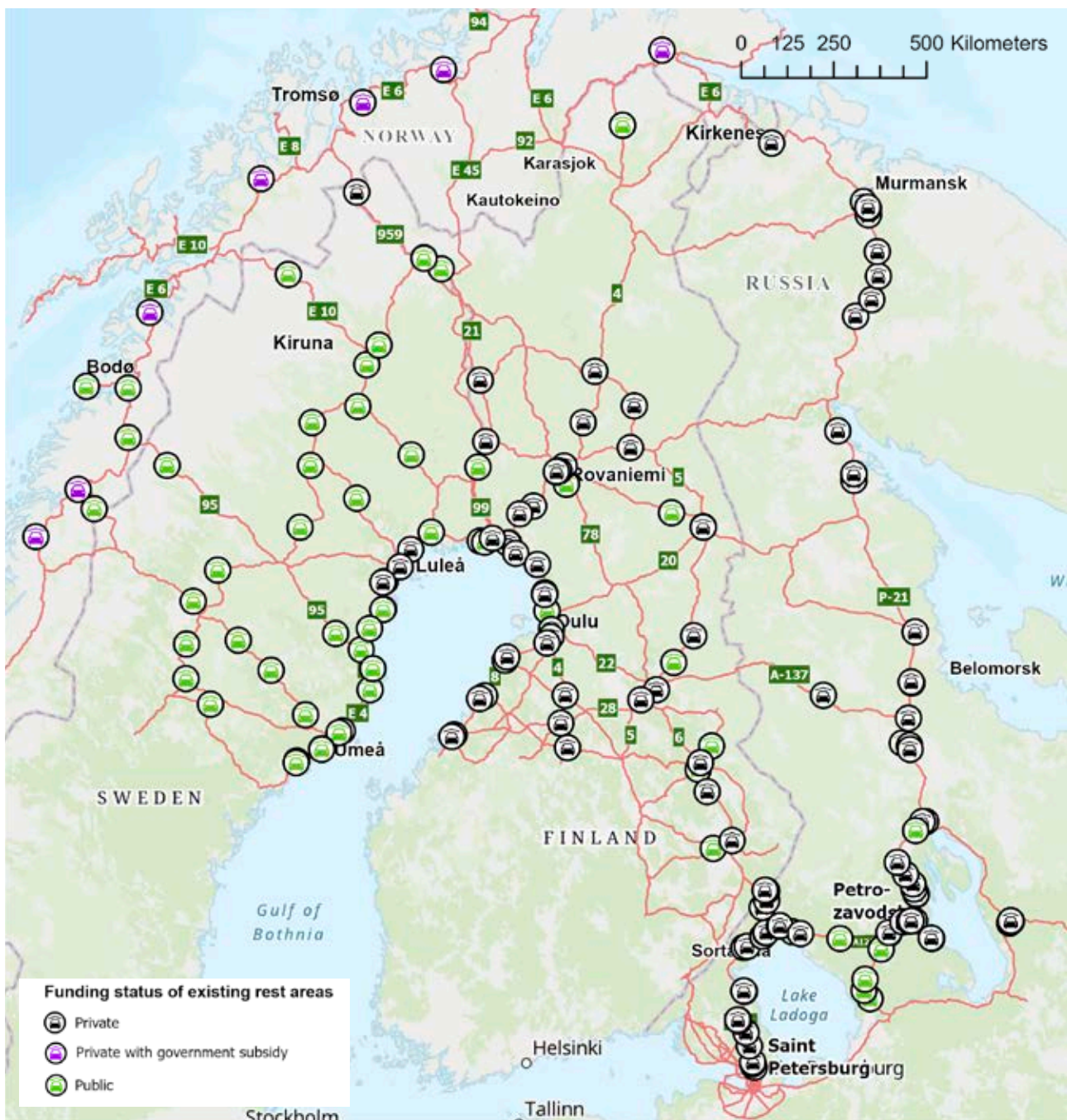
Private	118
Private with public subsidies	7
Public	63
Existing 24h rest areas in total	188

A limited number (7) of 24h rest areas are privately owned but receive public subsidies. These 24h rest areas are all in Norway. As shown in the diagram they only constitute 3 per cent of the total number of existing 24h rest areas in the Barents region.



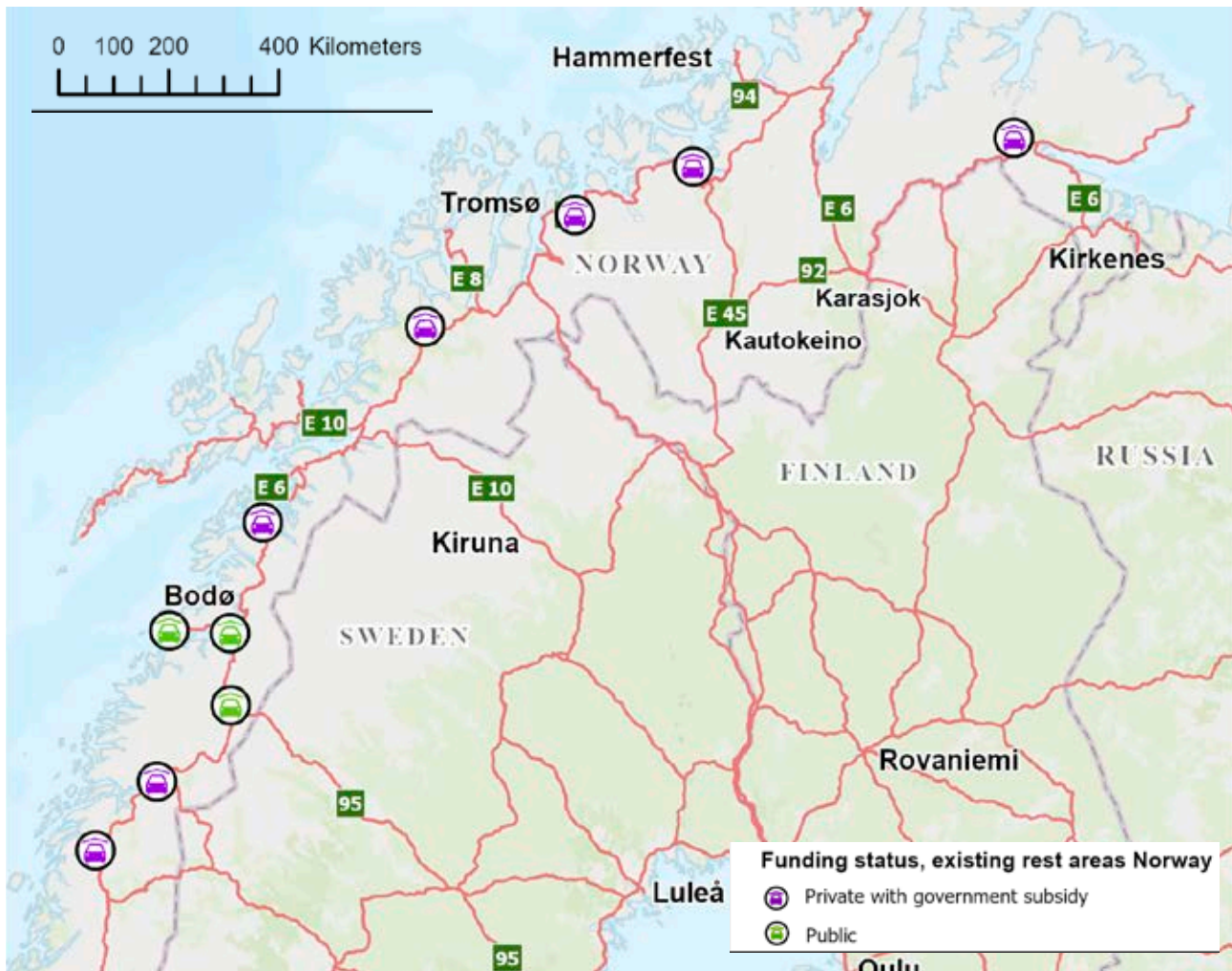
The financing in each country is described in more detail in the following sections. The following table gives an overview of the financing in each country:

24H rest areas	Total	Russian Federation	Finland	Sweden	Norway
Private	118	74	40	4	0
Private with public subsidies	7	0	0	0	7
Public	63	10	11	39	3
Existing 24H rest areas in total	188	84	51	43	10



Map 14: The 188 existing 24h rest areas in the Barents region with indication of financing

7.2 Financing of 24h rest areas in Northern Norway



Map 15: The 10 existing 24h rest areas in the Barents region of Norway with indication of financing

7.2.1 Public financing

In Northern Norway, the national government finances a 24-hour rest service in accordance with the minimum criteria described in this report.

In some cases, the national government itself owns and operates the 24h rest areas in Norway. In Northern Norway, one such 24h rest area exists (Fauske).

In other cases, the national government owns the actual parking area for 24-hour rest and operates this, including

necessary snow clearing during the winter, while private actors provide the other services offered on behalf of the national government. In Northern Norway, one such 24h rest area exists (Storjord).

In the remaining cases, private actors own and operate complete 24h rest areas, including parking areas and service buildings, on behalf of the national government. In Northern Norway, there are seven such 24h rest areas; thus, this model is used for 80% of the existing ten 24h rest areas in the region.

7.2.2 Partly public and partly private financing

All 24h rest areas in Northern Norway offer services in addition to the minimum criteria described in this report. Some of these additional services are national government-funded and some are privately funded.

The most important of the national government financed services are electricity for the operation of refrigerated/freezing containers, showers, lounges and kitchens. In some places, additional services are offered with full national government funding, such as a ramp for removing snow on container roofs or a washing machine.

Services that are privately financed involve the availability of kiosk goods, hot meals, vehicle washing and fuel. These typical petrol station services are 100% commercial at all 24h rest areas in Northern Norway, and without national government subsidy.

7.2.3 Private providers of publicly financed services

The 24h rest services provided by private parties, but financed by the national government, are subject to open tender in accordance with Norwegian regulations for public procurement. The concept falls into what is known as Public-Private Partnerships (PPP). PPPs allow national governments to procure long-term infrastructure services from private providers, rather than developing, financing, and managing infrastructure assets themselves.

The concept used in Northern Norway entails an arrangement between public sector and private sector entities whereby the private entities renovate or construct, maintain, manage and operate a facility in whole or in part in accordance with performance specifications. The private 24h rest area contractors provide both infrastructure (road area and parking space) and services (snow clearing, cleaning, etc.).

Contract periods for 24h rest areas are typically between 10 and 20 years. For some contracts, the national government has an option to renew the contract. There is great variation in contract content and annual price per

24h rest area. The variety of contract content is a result of the national policy at the time when the contract was signed, but also of the fact that the regional offices of the Norwegian Public Roads Administration previously had a greater degree of autonomy regarding service level at 24h rest areas. Factors such as the market situation also contribute to variation. The policy today still gives room for some flexibility between contracts, but the newest contracts are more detailed and standardised to ensure more uniform services to the transport industry throughout the region.

7.2.4 Private funding

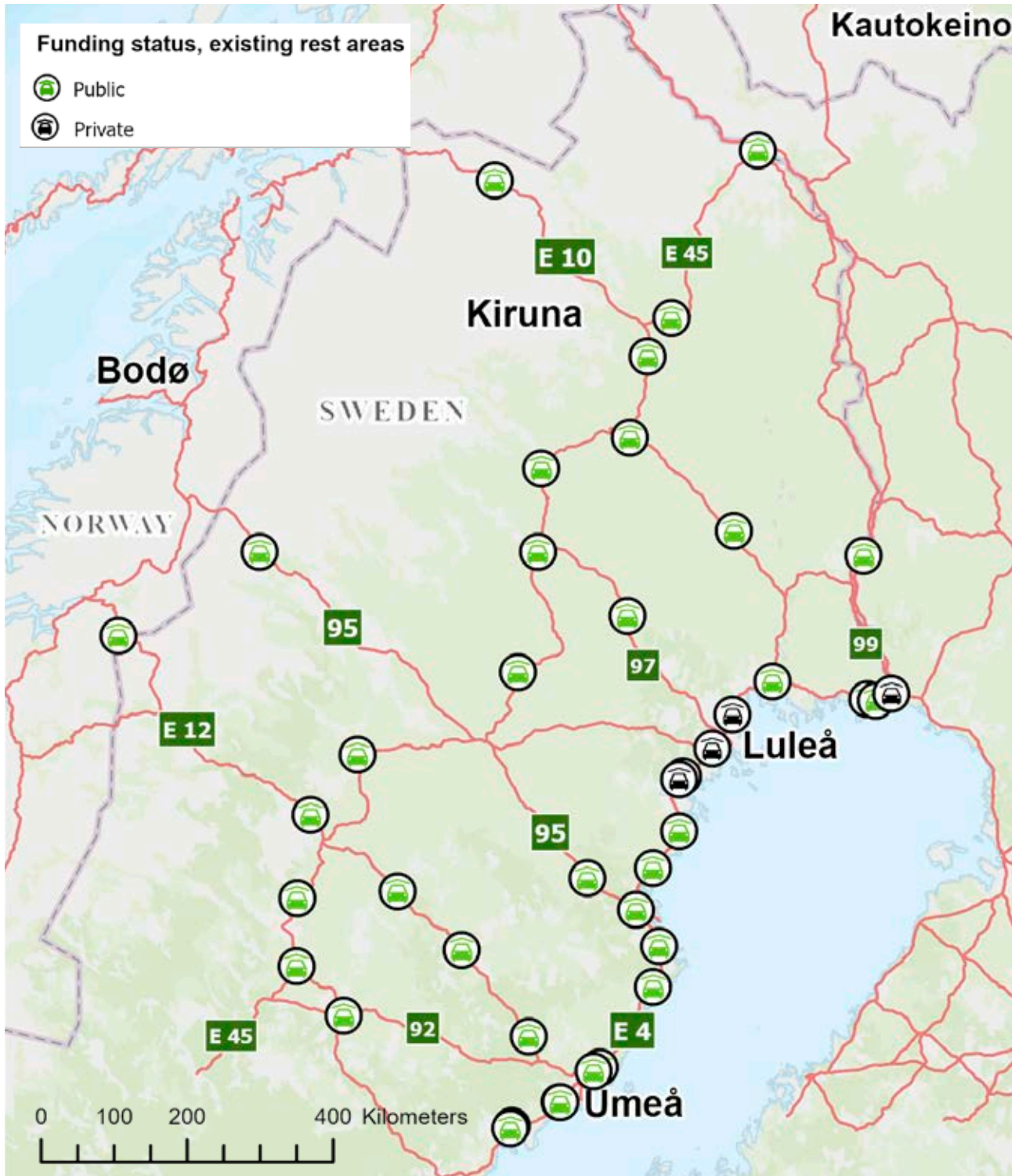
Completely privately financed 24h rest areas are non-existent in Northern Norway.

The limited number of customers in remote areas of the north is the main reason. A few rest areas in the southern part of Norway are 100% privately funded, but the most common solution for private rest areas in the whole of Norway is that they receive public funding. Regardless of cause, it is a fact that no fully commercial 24h rest areas have been established in Northern Norway.

Some large commercial petrol stations in Northern Norway might offer free use of toilets and waste containers and allow large vehicles to stay overnight from time to time, but no commercial petrol stations in Northern Norway have a dedicated and marked large vehicle parking area for the purpose of night rests.

No commercial/private entity in Northern Norway fulfils the national minimum specifications for a 24h rest area which includes showers free of charge, lounges, kitchen and electricity for refrigerated/freezing containers. These specifications are a prerequisite for using the official Norwegian road sign for 24h rest areas.

7.3 Financing of 24h rest areas in Northern Sweden



Map 16: The 43 existing 24h rest areas in the Barents region of Sweden with indication of financing

7.3.1 Public financing

In Sweden, the national government finances and operates rest areas with a service level that includes as a minimum: toilets (water closets), waste disposal, lighting etc. The minimum criteria for rest areas in Sweden have been described in this report. The national government itself owns and operates the rest areas in Sweden. Example: Bocksliden, road E12.

In some cases, the national government owns and operates the rest area for the purpose of rest for drivers, while private actors are established right next to the national government-owned rest area with a higher level of service. The service level offered by the national government meets the minimum criteria mentioned above, and the services provided by private actors mostly involve kiosk goods, hot meals and fuel. These typical petrol station services are 100% commercial without any public financing. Example: Lansjärv, road E10.

There are examples of rest areas that are semi-integrated with commercial facilities where, for example, the toilets are owned by parties other than the national government but may be used by the users of the national government's rest area, although none of these are in the northern part of the country that is included in this report.

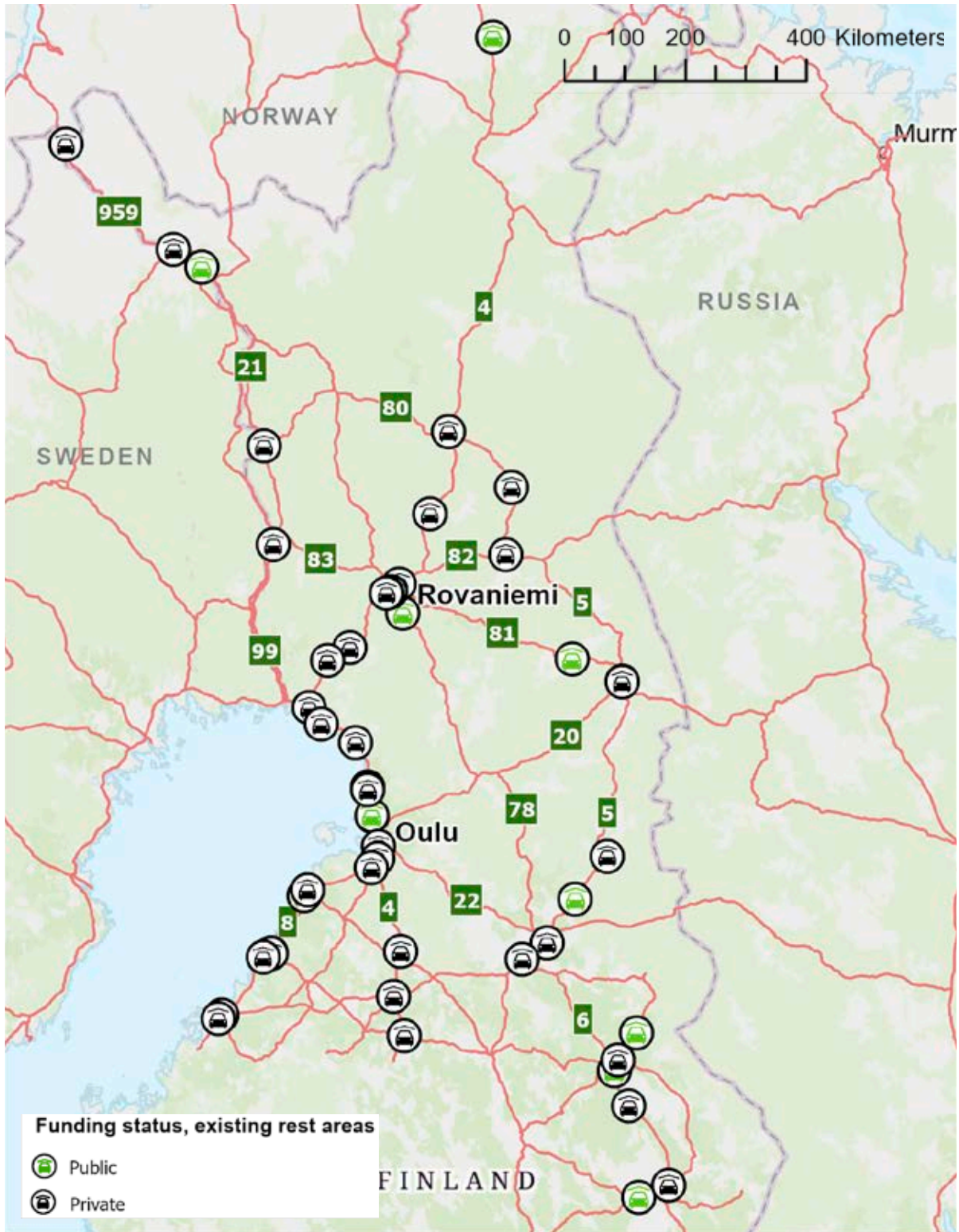
It is not common, but there are some examples of municipality-owned rest areas in Sweden. However, none of these are in the northern part of the country and therefore not included in this report.

7.3.2 Private financing

Completely privately financed rest areas exist in Sweden, although these are significantly fewer than the public rest areas. In Northern Sweden, the existing private rest areas are located along the coastline on the E4 road. A more limited number of customers, due to a smaller population and fewer road users in the northern parts of the country, is the main reason.

The private rest areas are usually large commercial petrol stations that offer free use of toilets and waste containers and have assigned heavy vehicle parking spaces for overnight parking.

7.4 Financing of 24h rest areas in Northern Finland



Map 17: The 51 24h rest areas in the Barents region of Finland with indication of financing.

7.4.1 Public financing

In Northern Finland, in principle the national government finances 24h rest areas along the main roads. However, there is at the time no major need to enlarge the road network and therefore hardly any new publicly financed rest areas are to be completed.

Publicly financed 24h rest areas in Finland only provide services corresponding to the minimum criteria described in this report.

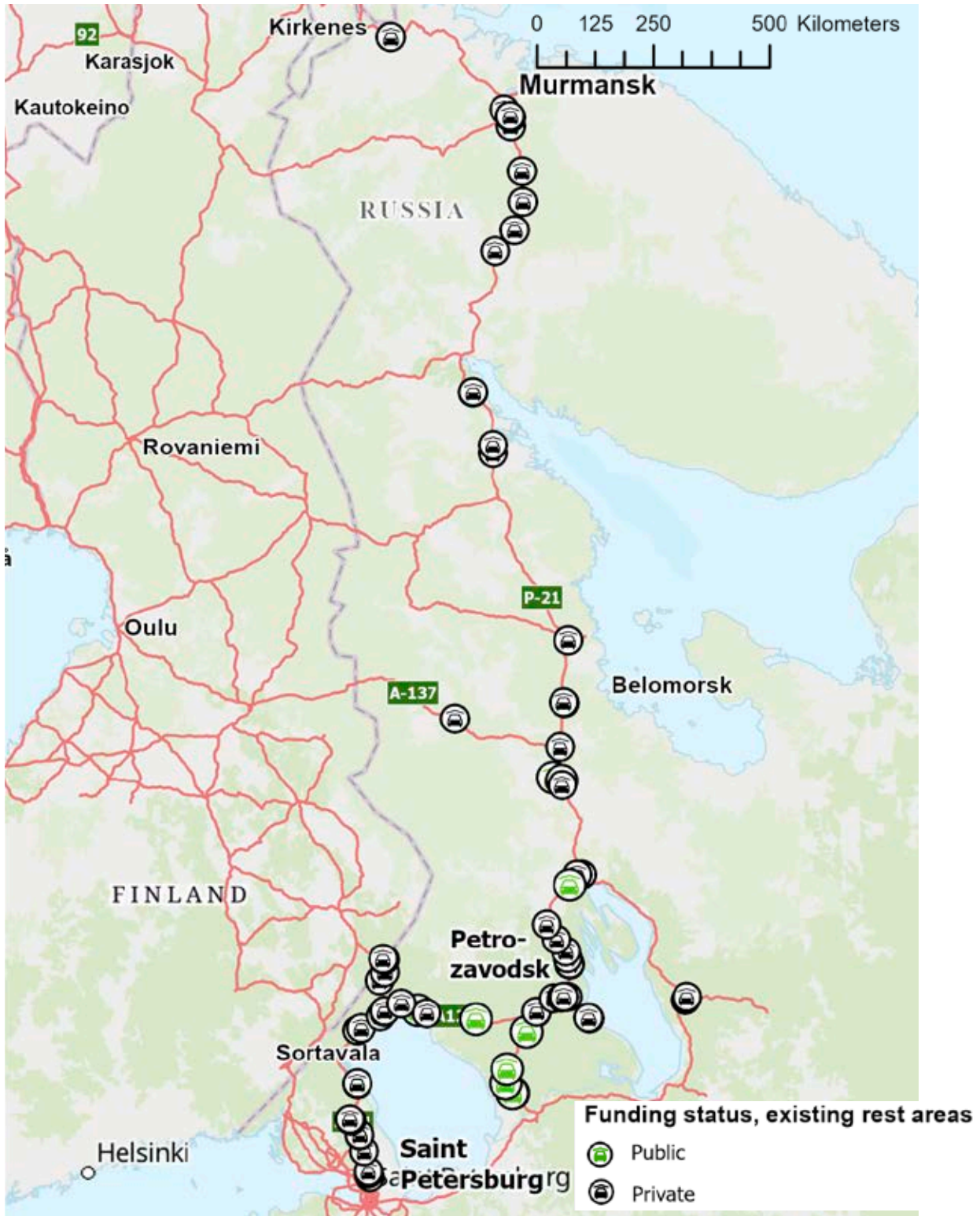
7.4.2 Private financing

Completely privately financed 24h rest areas in Northern Finland are best equipped when it comes to services. The best equipped rest areas offer cafeteria/restaurant, shop/kiosk, free toilets, sometimes showers and space for drivers of heavy vehicles to rest, as well as dedicated parking for heavy vehicles.

The network of privately financed 24h rest areas is quite comprehensive in Northern Finland. New and planned 24h rest areas are to be defined by private operators.

In Finland the road authorities concluded in 2000 that services for drivers of heavy vehicles are to be based on the market economy. Thus far there are no newer guidelines. Now Finland is preparing a national transport plan for the next 12 years. An possible issue is a national network of rest areas for heavy goods vehicles. This could mean that in future the national government may take a more active role in enhancing the services available to heavy vehicle drivers. However, the main principle, to rely on private businesses, is likely to remain the same.

7.5 Financing of 24h rest areas in Northern Russia



Map 18: The existing 84 24h rest areas in the Barents region of Russia with indication of financing

7.5.1 Public financing of all basic services

Recreation areas such as 24h rest areas for heavy vehicles on public highways of federal significance in the Russian Federation are ensured public financing. These recreation areas are equipped with lighting, recreation pavilions and WCs.

Public recreation areas are located about 30-50 km apart, depending on the traffic intensity, the category of roads and the date of construction (or reconstruction). Such recreation areas are designed and built at the same time as construction or reconstruction works on highways, using state funding without private investments.

In accordance with current legislation, there are private and state recreation areas in the Russian Federation along transport corridors, including the public highways of federal significance such as the R-21 Kola, the route Tiksha-Ledmozero–Kostomuksha-border with the Republic of Finland, the A-119 Vologda–Medvegiegorsk–highway R-21 Kola in the Republic of Karelia and the Murmansk region, and the A-181 Skandinavia of the Leningradskaya region.

7.5.2 Private financing of additional services nearby

According to the current national standard, it is permitted to locate private recreational areas, that do not interfere with other road users, next to the publicly financed recreation areas. Additional road services are sometimes situated in the immediate vicinity of the national government recreation areas. Typical services offered are café/restaurant services and sale of goods.

In most cases the private recreation areas are in fact petrol stations, equipped with fuel pumps, lighting, parking, shops and a café. Such areas are entirely built and maintained by private investors. The locations for their construction are determined by private investors on their own, in accordance with the rules for safety standards established by the technical requirements of the national government.

8 Recommendations

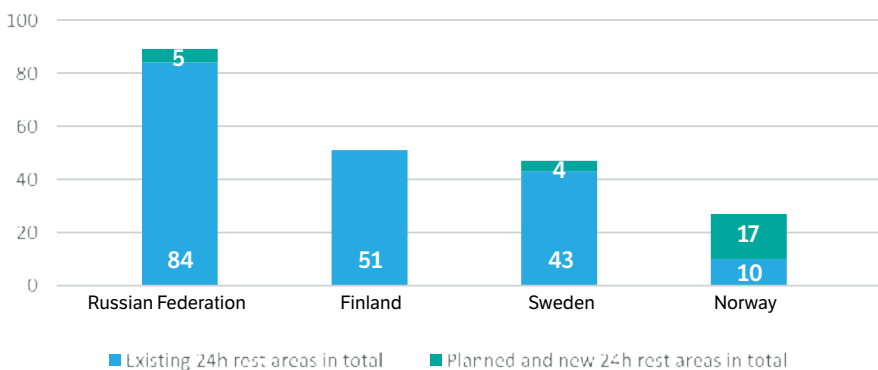
The joint Expert Working Group recommends that 26 new 24h rest areas are built along the prioritized roads in the Joint Barents Transport Plan.

8.1 Recommendations for Barents measures

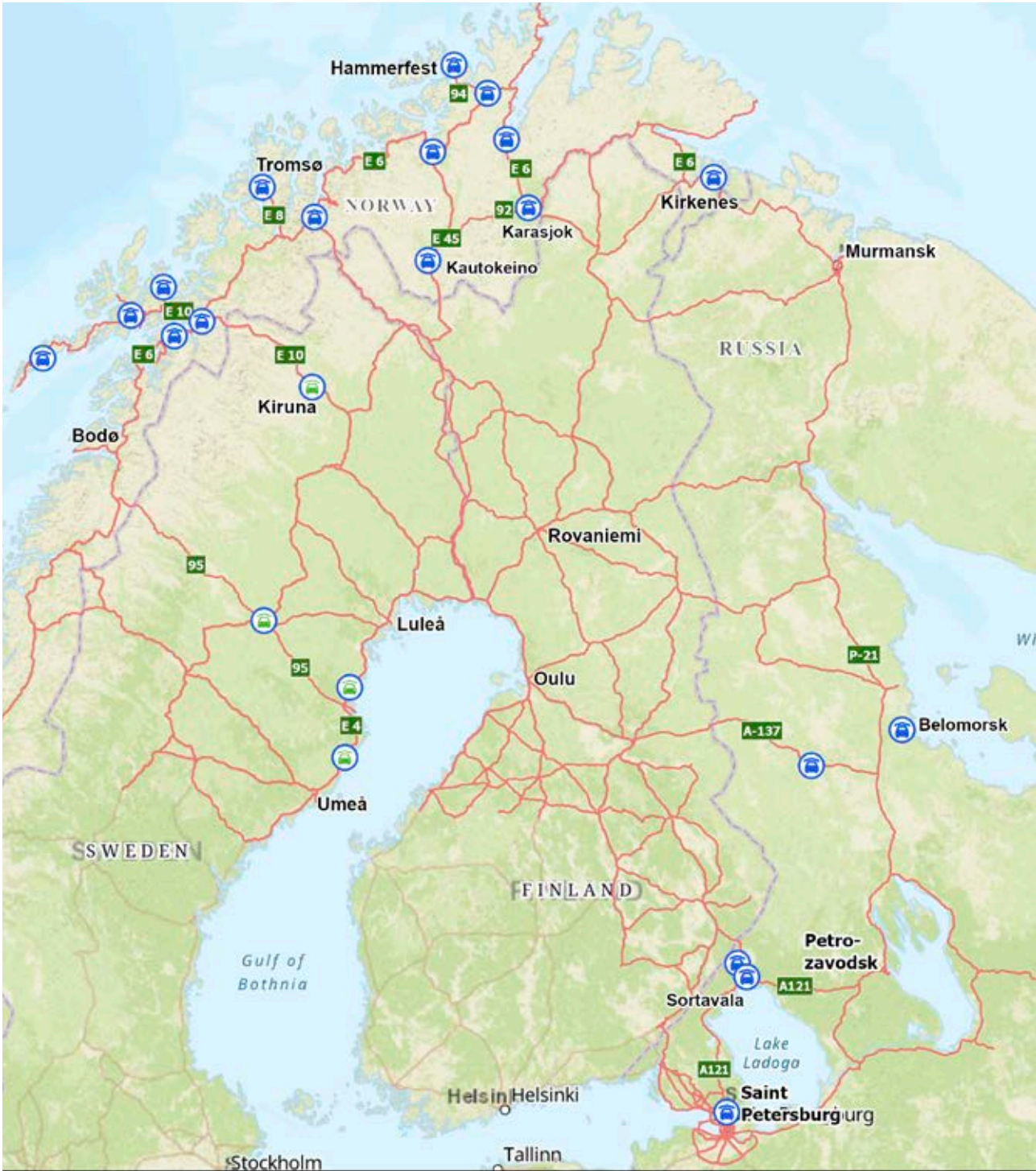
- There is a need for new 24h rest areas. This should be a priority. We recommend no more than 150 km between two rest areas.
 - Higher focus on security. A simple matter like illuminated areas can greatly increase the feeling of security.
 - Extra focus on female drivers of heavy vehicles. Their needs might be somewhat different from male drivers.
 - Focus on the need for climate-related services and content. The winter season in the Barents region is challenging for heavy vehicles, and when developing existing or building new 24h rest areas, equipment like ramps for snow removal from the roofs of heavy vehicles should be considered.
 - Study the possibility of charging stations for electric vehicles that allows slow charging over nights at 24h rest areas, to meet the demand for greener transport
- 26 new 24h rest areas should be built along the prioritized roads in the Joint Barents Transport Plan
 - 17 new 24h rest areas are needed and partly planned in Northern Norway. They should receive financing and be established as soon as possible.
 - 4 new 24h rest areas are planned in Northern Sweden. They should receive financing if needed and be established as soon as possible.
 - 5 new 24h rest areas are planned in Northern Russia. They should receive financing if needed and be established as soon as possible.

It is very difficult to suggest the cost of a new 24h rest area. We have estimated a cost of 2-5 mill Euro per new 24h rest area. This figure includes the land property, building of parking spaces and facilities, water and sewage pipes to the location. In our estimation of the cost of establishing all the recommended 24h rest areas we have taken into consideration that the majority of the new/planned 24h rest areas are to be built in Norway. The cost per rest area is considerably higher in Norway compared to the neighboring countries. We think the total cost of all the recommended new 24h rest areas will be in the range of 50 – 75 mill Euro. The investment can be either public or private or a mix thereof.



Recommended number of 24h rest areas



The diagram sums up the situation with all recommended 24h rest areas in place:



Planned rest areas

-  Ownership: public
-  Ownership not assigned

0 125 250 500 Kilometers

Map 19: Recommended new 24h rest areas in the Barents region

9 ATTACHMENTS AND REFERENCES

9.1 Attachments

9.1.1 Mandate from BEATA

Mandate for an Expert Working Group for Development and Implementation of 24-hour Rest Areas Along Border Crossing Roads in the Barents Region

Freight transport by road is increasing also in the Barents region. We find an increasing need for safe and secure night rest facilities for the drivers of freight transport vehicles. International freight transports to and from the northern regions cover long distances. It is important that transports are safe, secure and efficient. Drivers' hours regulations require drivers of heavy vehicles to take breaks and to have sufficient resting time in order to achieve a normal sleeping period. Rested drivers are important for the overall road safety. The 24-hour rest areas have a major impact on safety as well as on the welfare of professional drivers. Emphasising the need for a reasonable standard is therefore important. The transport authorities have an overall responsibility to provide and develop a transport network that is safe and efficient for all road users. Rest areas are part of the road system and the authorities should, in cooperation with the transport industry, local industry such as tourism facilities and local authorities, provide safe and secure night rest areas for heavy goods vehicles and their drivers.

One of the recommendations in the Draft Joint Barents Transport Plan (JBTP) revised in 2019 is to develop more and better rest areas for the drivers of heavy goods vehicles:

«The availability of rest areas for lorry drivers (for both shorter and overnight breaks) increases traffic safety and promotes efficiency of the transport system. The experts propose that each country investigate the need for rest areas on the prioritized corridors in Appendix 1, both to increase safety and to improve the efficiency of the transport.

Responsible: The road administration in each country»

Referring to the Umeå Ministerial Declaration from September 2019, the transport ministers emphasise that the transport system should meet the needs of both women and men. It is therefore important that the Expert Working Group pays attention to the need for rest areas adapted to both female and male professional drivers.

We find it appropriate to base the work on the corridors defined by the JBTP. Development of the 24-hour rest areas along cross-border roads should be done in a co-ordinated manner. The Steering Committee of BEATA therefore proposes to establish a working group led by Norway that shall make a report on the need, status and possible locations for 24-hour rest areas. It will be up to the Working Group to decide if all routes shall be investigated or a selection of them. A selection of routes shall consist of routes from all Barents countries. Existing regulations, standard requirements and definitions in each country shall be taken into account. In some of the countries, these are under revision. EU Regulation No. 1315/2013 of 11 December 2013 can be a relevant reference for the work. The Working Group should also take note on the ITS directive 2010/40/EU, point e and f regarding information on resting areas.

The Steering Committee of BEATA gives the Working Group (WG) the following mandate:

- The WG shall be led by the Norwegian Public Road Administration
- The WG shall consist of representatives from the road or transport administrations in the Barents countries as well as representatives from the regional level.
- The work shall include dialogue with relevant organizations and stakeholders in the sector hereunder trade unions
- The WG shall by the end of October 2020 deliver a report to the Steering Committee of BEATA with:
 - o An overview over public and private rest areas

for heavy goods vehicles along the corridors defined in the JBTP appendix.

- o A description of standard requirements for safe and secure rest areas in the different countries.
- o An overview of planned public and private rest areas in the defined corridors as well as reference to strategies and/or proposed locations
- o An elaboration on the future need for rest areas along the defined corridors taking into account the specific regional conditions, the need for both female and male drivers, the technological development and changes in the transport industry and the flow of goods.
- The WG shall by the end of 1st quarter 2021 deliver a report to the Steering Committee that:
 - o Points out the need for improvement of current rest areas .
 - o Proposes suitable locations for new rest areas that provide good coverage on the border crossing roads and appropriate driving distances between them.
 - o Presents good examples of design and content
 - o Discusses the location of rest areas in connection with the development of infrastructure for sustainable energy for heavy goods vehicles
 - o Considers the need and possibilities for user information, surveillance and inspection for safe and secure usage of the rest areas. ITS solutions will be a part of these considerations.
 - o Provides a common situation report concerning security problems at rest areas in the region
 - o Analyses costs and presents a solution for the financing of these rest areas.
 - o Proposes recommendations for development of rest areas along the border crossing corridors in the Barents region

- 24 June 2020 -

9.1.2 Dialogue with key stakeholders and the transport industry

Meeting in Norway

Organisation: Norges Lastebileierforbund (NLF) Nordland, Troms and Finnmark

Date of meeting: 5 February 2021

Agenda: Challenges related to 24h rests for drivers in Northern Norway

Present: Odd Hugo Pedersen, Regional Director Northern Norway and Frank Lauritz Jensen, Adviser

Meeting in Finland

Organisation: Voluntary-based interest group for professional drivers of heavy vehicles Rahtarit ry

Date of meeting: 7 October 2020

Agenda: Current status of rest areas in Finland from the industry's perspective, introduction of Rahtirastit map. The purpose of the map is to show private rest areas and their services in Finland.

9.1.3 Female Northern Norwegian drivers' experiences and challenges

Interview number 1

When it comes to security, there are concerns about being approached by drug-addicted petty criminals, as well as the theft of chains and taillights during the night by colleagues. Insecurity can be so strong that female drivers have acquired and stored illegal personal defence equipment in the vehicle. Doors are always kept locked and windows are allowed just a narrow open crack for fresh air during nights.

Regarding toilet conditions, the significant difference in women's and men's need to be undressed on the lower body during all toilet visits is emphasised. In addition, there are the extra toilet visits that women need during menstrual periods. What is primarily required, according to the two drivers we spoke to, is access to toilets within a reasonable time frame when you need them.

Unfortunately, experience shows that public toilets, even where they exist, are to a limited extent available in practice. Three challenges are highlighted; toilets for road

users are closed (especially in winter), the rest area is not cleared of snow, or rest areas with toilets are occupied by tourists in the summer.

There are also private toilets available outside the designated rest areas for heavy transport. Private toilets that are open, and have good cleaning, unfortunately sometimes require that you must buy food and drinks / be a customer at the establishment to use the toilet facilities. Private toilets (this does not mean private 24-hour rest areas, which do not exist in Northern Norway) also do not cover the important need for toilets in the morning for drivers, since they do not allow overnight parking.

The result of the lack of a clean and open toilet is that drivers use the outdoor surroundings in connection with parking lay-bys and rest areas. Since the nature near public toilets is used by the many who do not find the public toilets acceptable, a driver reports that she is looking for less attractive places (parking lay-bys without toilets) to stop for night rests with her heavy vehicle. In such places the surroundings are cleaner and you are less likely to be observed by others during open-air toilet visits. Unfortunately, the female drivers we have spoken to believe that it happens that women must take care of their toilet-related needs inside the car, or in hiding under the vehicle. Very little attention is given to these challenges. They are highly private for each individual driver. Some may even find them shameful. A reason why female drivers do not speak up more about these issues may be that they are a very small minority and women enter the male-dominated driving profession on men's terms.

Interview number 2

Stays at hotels because of the inadequate situation when it comes to toilet, showers and the need for a good night's sleep without worries about her own security. The company she works for is aware of the situation and insists she stays at hotels despite the extra cost.

Because of her fortunate position as a guest at hotels with dedicated bus parking, the driver lacks an recent experience like those the first interviewed female driver describes. She still totally supports her description. She supplements it by telling us about her experiences with drivers from specific countries that she regularly encounters in her job in one-to-one situations. She believes

these drivers have a very old-fashioned view on women and she is often the victim of harassing comments from (the majority) of them. Therefore, she says, she could never have a good and restful night in a 24h rest area surrounded by these men. The public 24h rest areas in Northern Norway are extremely dominated by drivers from foreign countries she finds.

9.1.4 Female Northern Swedish drivers' experiences and challenges

Interview number 1

Is it one or some special rest areas that you often visit? Why?

Harrbäcken, Byske and Lansjärv. Because there are not many other rest areas that I find suitable on the journey I make. Many of the others are tight and narrow, others have the entry or exit situated in slopes which are not ideal especially during winter. The rest areas are not only tight they are also many times full and no parking spaces left. The parking spaces are in some cases made for a trailer and not a full length 24m vehicle which makes it too tight leaving the parking space when others are parked right next to you.

Have ever you stopped at a rest area that you thought were extra good? Explain why.

Lappesuando is a good rest area. Unfortunately, this one is also placed in a slope, but it has big entry ways from both sides which makes it possible to park downhill when the weather demands it. Good full-size parking and close to the toilet building.

Have you ever stopped at a rest area that you thought were less good? Explain why.

Töre is bad during winter conditions, you are forced to park in a slope which is not great when it's snowing. Tjärn is narrow/tight and always full also Marsjön is too tight. Ljusvattnet is another tight rest area and it can be a challenge to exit from it during winter.

Have you ever felt insecure/unsafe when you have stopped at a rest area?

If you want to share please explain why.

No

The service that is offered at rest area in Sweden is toilet, garbage disposal, lightning, parking area and tables. Do you find this service to be satisfying or do you miss something?

Easy accessible toilets – since not all rest area are easy or suitable to stop at it becomes further between the toilets.

Do you have any extra information or thoughts about rest areas that you would like to add?

No.

9.2 References

1. Hovedfunn-medlemsundersøkelse-doegnhvileplasser_631134.pdf (lastebil.no)
2. app.truckparkingeurope.com
3. United Nations Sustainable Development – 17 Goals to Transform Our World
4. Statens vegvesen Veileder V136 Døgnhvileplasser
5. Scania & Ahola Transport: Semi-autonomous platooning - Industry Europe
6. <https://ec.europa.eu/transport/sites/transport/files/2019-study-on-safe-and-secure-parking-places-for-trucks.pdf>
7. Keylin Johansen and Julianne Brox
8. https://ec.europa.eu/transport/themes/its/road/action_plan/intelligent-truck-parking_en
9. Study on safe and secure parking places for trucks, European Commission (2019)

