

# Research funded by the Public Roads Administration of Iceland

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## 1. Introduction

The Public Road Administration of Iceland (PRA) is a government agency under the Ministry of Communications. As such, the PRA is the mechanism used by the public, the parliament, the government and the Ministry of Communications to promote and bring about the desired development of roads in Iceland. The tasks of the PRA include the planning, construction and operation of the road network and the servicing of road users. It further services the entire Icelandic road sector, through the drafting of road standards, research and development (R&D), the presentation of information, advisory activities, the collection and presentation of data, as well as international activities for the benefit of the entire Icelandic road sector.

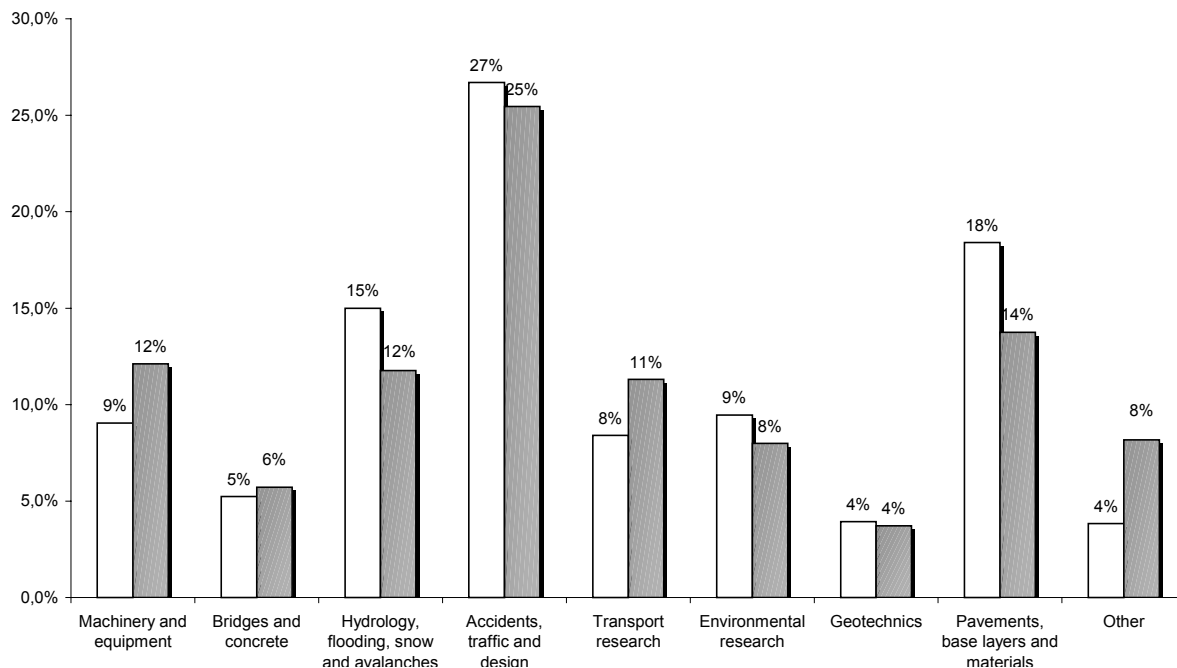
The today's societies consistently place increasing demands on the road network resulting in increasing demands for research and development in the road sector. Research and development has always formed an integral part of the PRA's activities, but was effectively promoted in importance in 1994 with the establishment of a special Research and Development division. This was mainly prompted by increasing demands for research, new possibilities for participating in international co-operation through Iceland's membership of the European Economic Area and a new Roads Act that doubled the funds allocated to research projects. Currently 1% of PRA's earmarked sources of income goes directly into research and development, classified in the annual road budget as "research funding". In addition to those research projects, much research is conducted through preparation of works, design and construction such as hydrological studies, drilling, soil sampling, geological investigations, quarrying and aggregate studies, frost depth measurements, bearing capacity measurements and test at the PRA's laboratories. Traffic and accident research is another important aspect of the PRA's activities.

## 2. Research funded by the PRA 2002

In 2002 the allocation to research and development was ISK 98 million (1,2 m EUR) which represents 1% of PRA's earmarked sources of income. The themes of the PRA's research activities cover a broad spectrum and the funds are devoted to numerous projects, some which are carried out within the PRA and others at the Universities in Reykjavik and Akureyri, or by consultants, individuals, companies or other institutions. The projects are classified by the following 8 topics:

- Machinery and equipment
- Bridges and concrete
- Hydrology, flooding, snow and avalanches
- Accidents, traffic and design
- Transport research
- Environmental research
- Geotechnics
- Pavements, base layers and road construction materials

In 2001 and 2002 funds were granted to approximately 100 projects each year, which may be classified by the 8 topics as shown in Figure 1.



**Figure 1 Distribution of research funds 2001 and 2002**

Priority is given to one topic every 5 years. Between 1995-2000 priority was given to pavements, base layers and road construction materials (known as BUSL), representing approximately 35% of the total funding allocated to research and development. BUSL was undertaken by the PRA, the Reykjavik Municipality, the Building Research Institute and the University of Iceland, Faculty of Engineering. Some of the BUSL projects will be presented here at this conference.

Between 2001-2005 the priority will be given to projects involving accidents and traffic safety. Approximately 28%-30% of the funding over the last two years (2001-2002) has been made to the priority projects. In order to co-ordinate and share utilisation of researches in this field more effectively, projects were all incorporated into a single collaborative programme under the leadership of RANNUM, The Icelandic Traffic Safety Research Board, which was established in December 2000. RANNUM is an expert council with external members drawn from various parts of the road and traffic safety sector<sup>1</sup>. The

<sup>1</sup> The Public Roads Administration in Iceland, The Icelandic Red Cross, The Icelandic Traffic Council, The Icelandic Road Accident Analysis Group, The University of Iceland, The Icelandic College of Engineering and Technology, The University of Akureyri Iceland, Reykjavik University, The City of Reykjavik, The Icelandic Building Research Institute, The Directorate of Health, Landspítali - University Hospital, The National Commissioner of the Icelandic Police, Association of Icelandic Insurance Companies, The Icelandic Automobile Association, Association of Driving instructors, the Central Motor Register.

primary purpose of RANNUM is to promote research that can be applied to prevent road accidents and to gather new national and international knowledge in the road safety sector.

### **3. International co-operation**

In addition to the PRA's own research and development, it co-operates with various international organizations and participates in international projects through the sharing of research findings and the knowledge acquired. The PRA collaborates with a number of research institutes, universities and road authorities abroad, especially within the EU and the Nordic countries, and actively participates in many international research projects within EU research programmes, the COST (European co-operation in the field of scientific and technical research) programme and OECD research programmes.

As an example of European projects which Iceland has participated in more or less through the leadership and funding of PRA, the following COST projects can be mentioned:

- COST 323 - Weigh-in-Motion of Road Vehicles.
- COST 331 - Requirements for Horizontal Road Marking.
- COST 333 - Development of New Bituminous Pavement Design Method.
- COST 334 - Effects of Wide Single Tyres and Dual Tyres.
- COST 336 - Use of Falling Weight Deflectometers in Pavement Evaluation.
- COST 337 - Unbound Granular Materials for Road Pavements.
- COST 344 - Improvements to Snow and Ice Control on European Roads and Bridges.
- COST 347 - Pavement Research with Accelerated Loading Testing Facilities.

There is no road research institute in Iceland and the transport research community is very small. That limits the number and size of research projects and makes international cooperation even more important than in most other countries.

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