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The presentation of "Amphibians and roads" project

IENE meeting

Albufeira, Algarve 2002

HISTORICAL OVERVIEW

- ✍ **Savage R.M. (1935):** The influence of external factors on the spawning date and migration of the common frog.- *Rana temporaria* Proc. zool. Soc.
- ✍ **SWITZERLAND:** first reported road kills of toads (Heusser, 1960, 1964)
- ✍ **GERMANY:** Amphibians and Roads Conference (Münch D. 1992: Strassen Sperrungen. Neue Wege im Amphibienschutz) **FIRST INTERNATIONAL CONFERENCE:** Toad Tunnel Conference in Rendsburg, Germany, 7-8 January 1989 (Langton, 1989)
- ✍ **SWITZERLAND:** *Installation de protection pour les batraciens efficacite et effets secondaires* (Berthoud & Müller, 1983)
- ✍ **SWITZERLAND:** *Amphibien und Verkehr* (Grossenbacher 1985; Ryser 1988; Ryser 1989)
- ✍ **GERMANY:** Das Merkblatt zum Amphibienschutz an Strassen (MAmS) 1987 & 2001

LEGAL PROTECTION IN SLO

- **Amphibian species protection act**
 - Decree for the Protection of Rare and Endangered Animal Species and their developmental forms (Ur.l. RS No.57/93) - protects all amphibian species except *Salamandra salamandra*
- **Adopted Protection laws**
 - The Environmental Protection Act (1993)
 - The Decree on EIA (1996)
 - The Nature Protection Act (1999)
 - Bern Covention (ratified 1999)
 - Bonn Convention (ratified 1999)

PROJECT DESCRIPTION

- ✍ “Amphibians and roads” was one-year project in 2000, financed by Ministry of Transport and Communications, Directorate for Roads
- ✍ Main goal was preparation of the baseline for the national strategy of mitigation and conservation measures for amphibians on national roads

PROJECT DESCRIPTION

✍ **National workshop “Amphibians and Roads”**

(Lesce, 17.10.1999) with Proceedings

✍ **Public relations**

- articles
- radio interview
- project home page
- questionnaires

✍ **Survey**

of 4200 km (out of 6000) of national roads

✍ **Data base**

✍ **Preparation of Guidelines and National Strategy**

PROJECT DESCRIPTION

✍ overview of amphibian road mortality in Slovenia

✍ preliminary proposal of the national strategy of amphibian conservation in the national road regulative concerning road maintenance and management

METODOLOGY

✍ Field work

✍ Literature

✍ Information gathered with the public awareness campaign

Field work



- ✍ night transects
- ✍ standard procedure **Night driving** by Shaffer & Juterbock (1994): driving 40 km/h, recording amphibian mortality
- ✍ 56 collaborators, 1300 field hours

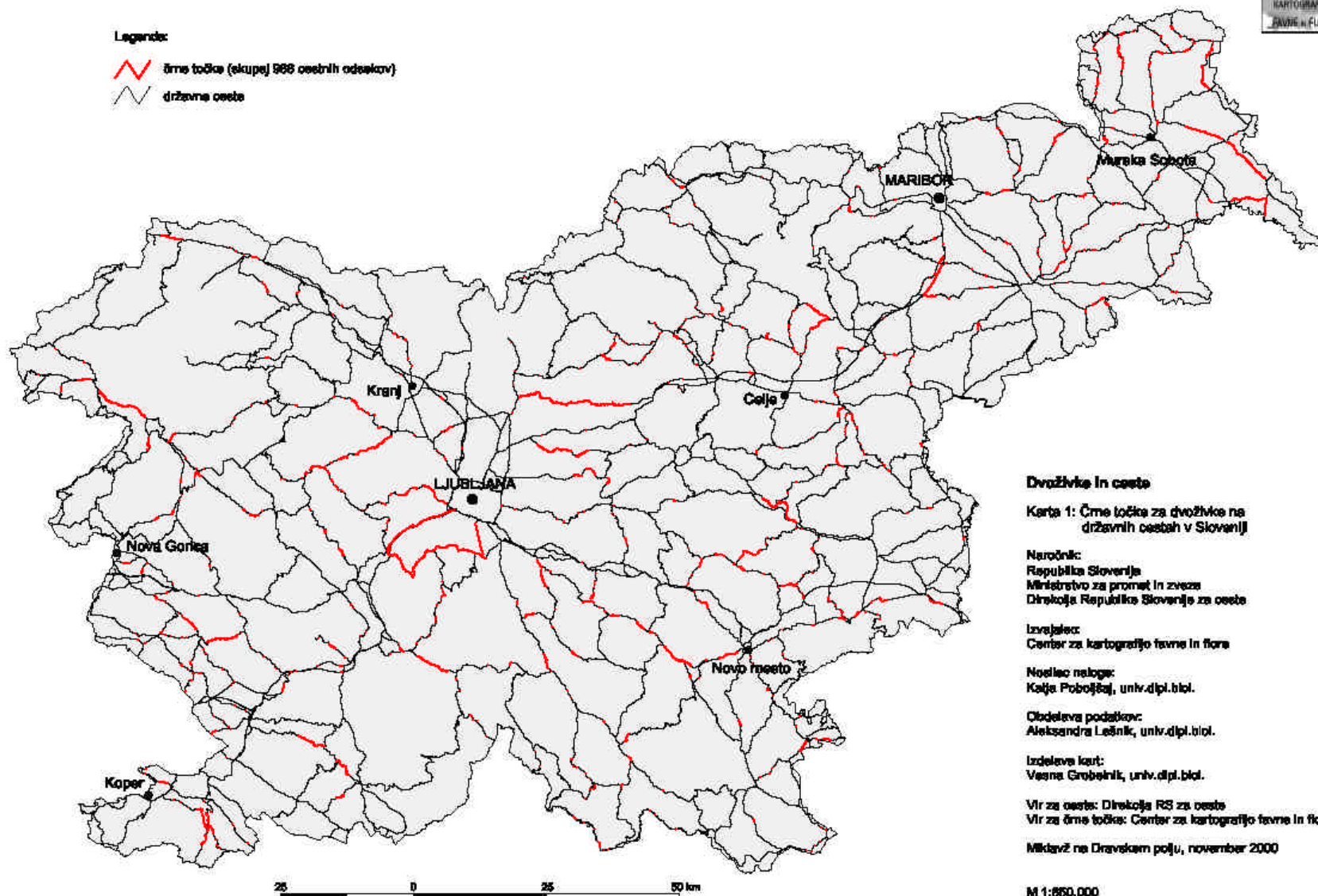
STATE OF THE ART

- ✍ 988 registered “black spots” on national roads
- ✍ 217 registered “black spots” on local roads

- ✍ “black spots” on 478 km (7,4 %) of 6463 km of roads
- ✍ ranging in categories

Legenda:

-  črne točke (skupaj 988 osebni odsekov)
-  državne ceste



Dvoživke in ceste

Karta 1: Črne točke za dvoživke na
državnih cestah v Sloveniji

Naročnik:
Republika Slovenija
Ministrstvo za promet in zveze
Direkcija Republike Slovenije za ceste

Izvajalec:
Center za kartografijo faune in flore

Načelnik naloge:
Katja Pobojščaj, univ.dipl.biol.

Obdelava podatkov:
Aleksandra Lešnik, univ.dipl.biol.

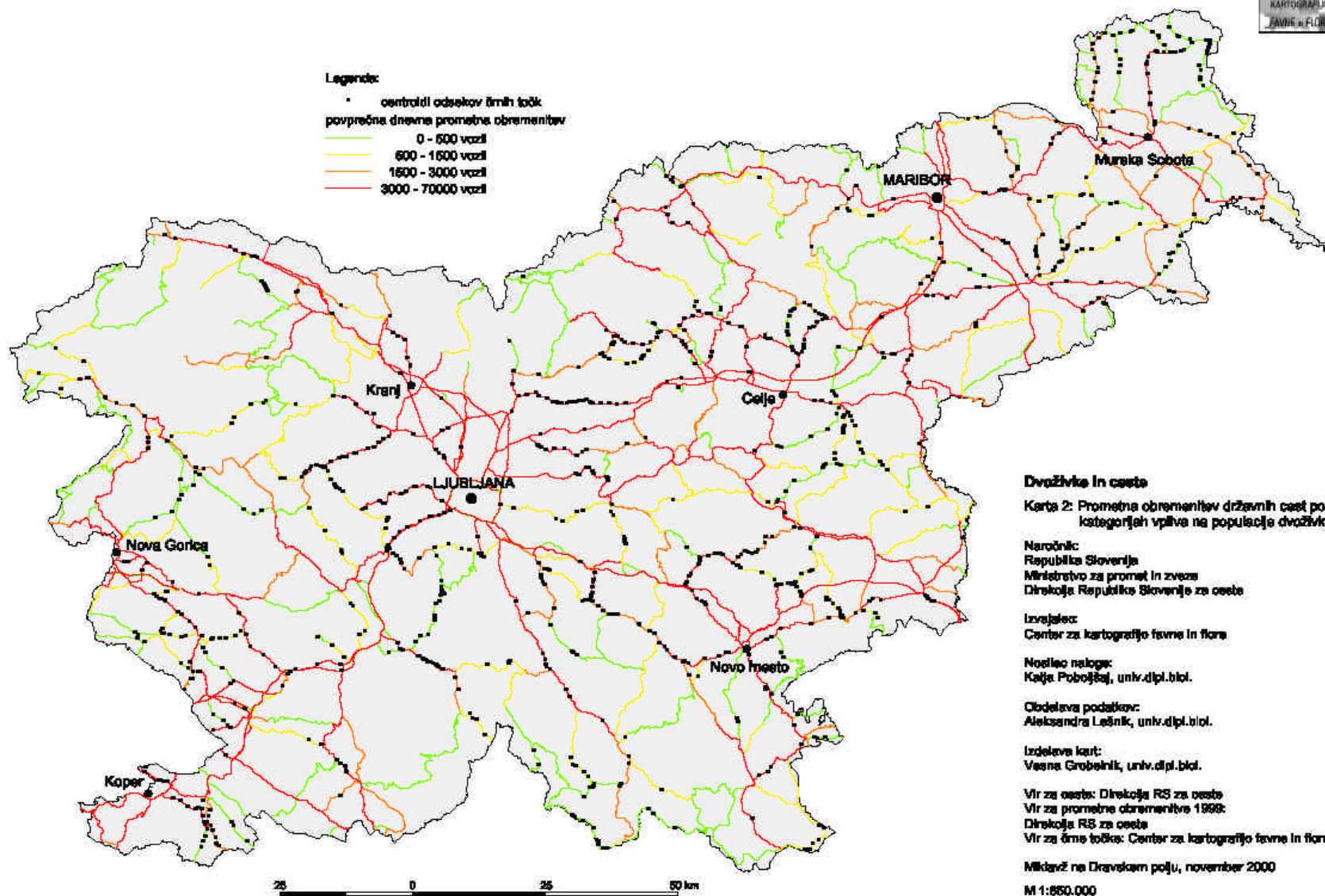
Izdelava kart:
Vesna Grobelnik, univ.dipl.biol.

Vir za ceste: Direkcija RS za ceste
Vir za črne točke: Center za kartografijo faune in flore

Miklavž na Dravskem polju, november 2000

M 1:850.000

- Legenda:
- centralni odseki žrnih točk
 - povprečna dnevna prometna obremenitev
 - 0 - 600 vozil
 - 600 - 1600 vozil
 - 1600 - 3000 vozil
 - 3000 - 70000 vozil



Dvoživka in ceste

Karta 2: Prometna obremenitev državnih cest po kategorijah vpliva na populacijo dvoživk

Naročnik:
Republika Slovenija
Ministrstvo za promet in zveze
Direkcija Republike Slovenije za ceste

Izvajalec:
Center za kartografijo terne in flore

Nosilec naloge:
Katja Pobojščaj, univ.dipl.biol.

Obdelava podatkov:
Aleksandra Lešnik, univ.dipl.biol.

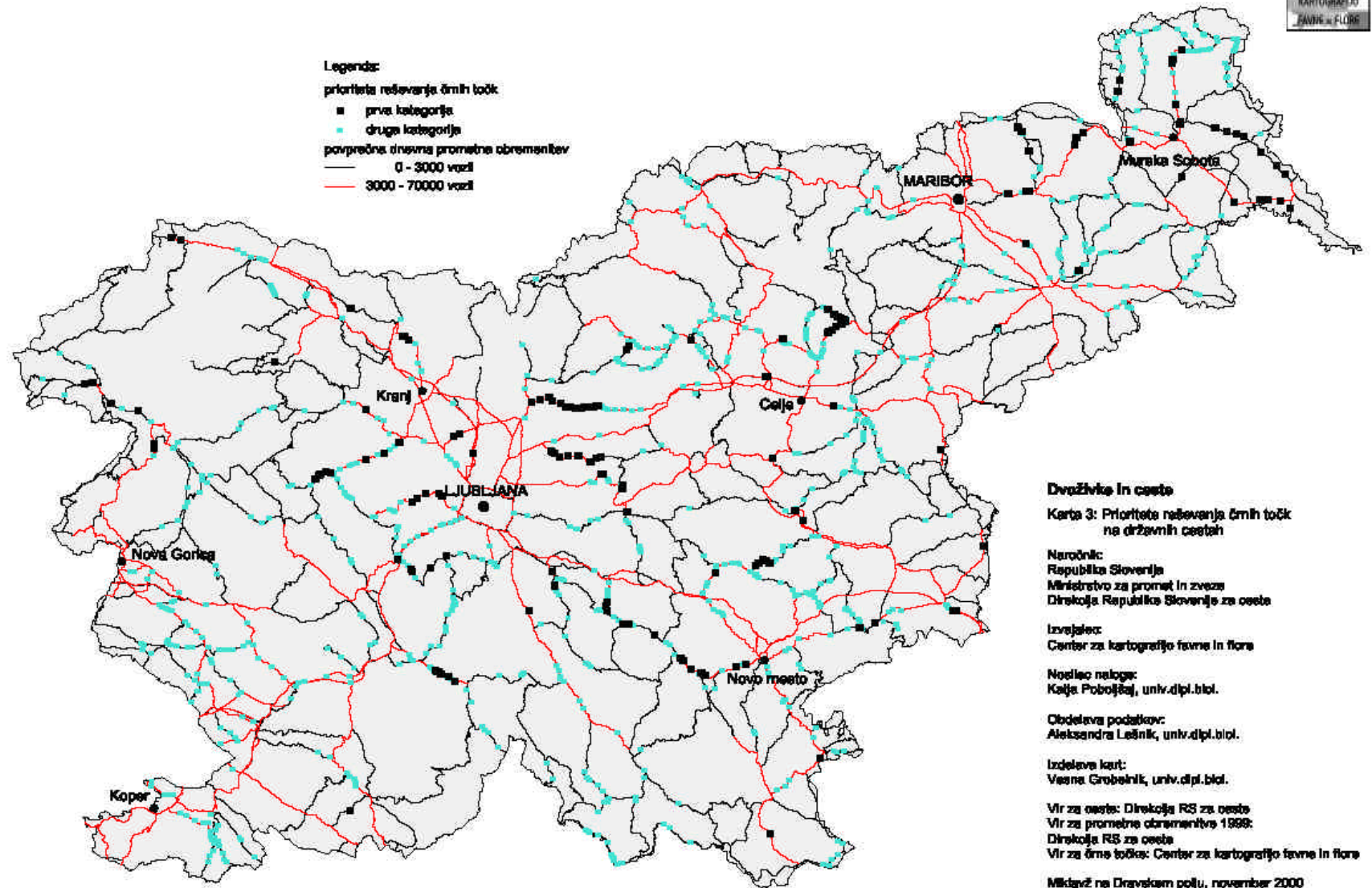
Izdelava kart:
Vesna Grobelnik, univ.dipl.biol.

Vir za ceste: Direkcija RS za ceste
Vir za prometne obremenitve 1998:
Direkcija RS za ceste
Vir za žrne točke: Center za kartografijo terne in flore

Miklavž na Dravskem polju, november 2000

M 1:850.000

Legenda:
prioriteta reševanja črnih točk
■ prva kategorija
■ druga kategorija
povprečna dnevna prometna obremenitev
— 0 - 3000 vozil
— 3000 - 70000 vozil



Dvoživka in ceste
Karta 3: Prioriteta reševanja črnih točk
na državnih cestah

Naročnik:
Republika Slovenija
Ministrstvo za promet in zveze
Direkcija Republike Slovenije za ceste

Izvajalec:
Center za kartografijo fakultete in flore

Načelnik oddelka:
Katja Pobojščaj, univ.dipl.biol.

Obdelava podatkov:
Aleksandra Lešnik, univ.dipl.biol.

Izdajalec kart:
Vesna Grobelnik, univ.dipl.biol.

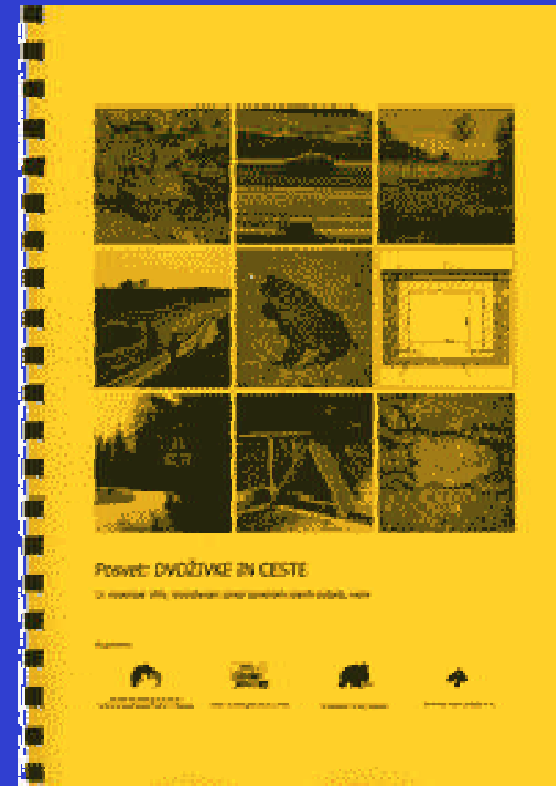
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Vir za črne točke: Center za kartografijo fakultete in flore

Miklavž na Dravskem polju, november 2000
M 1:850.000

Public awareness campaign

Workshop “Amphibians and roads”, 17. november 1999,

- ✍ road constructors
- ✍ planners
- ✍ nature conservationists
- ✍ decision makers
- ✍ media



FOLLOW UP

- ✍ use of database in road construction and reconstruction planning
- ✍ preparation of Ready -to-go documentation for 3 localities
- ✍ constant collecting of new information
- ✍ consultance on amphibian and roads topic

CASES FROM SLOVENIA

New highway Blagovica - Sentjakob



CASES FROM SLOVENIA

New high speed
railway road in NE
Slovenia

