

# Ewaluacja inwestycji drogowych w korytarzach TEN-T na przykładzie projektu ESPON TRACC

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## TRACC *Transnational Project Group*

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3. RRG Spatial Planning and Geoinformation, Oldenburg, Germany
4. Mcrit, Barcelona, Spain
5. University of Oulu, Department of Geography, Oulu, Finland
6. TRT Trasporti e Territorio, Milan, Italy
7. Instytut Geografii i Przestrzennego Zagospodarowania PAN
  - Piotr Rosik
  - Tomasz Komornicki
  - Marcin Stępniaak

## TRACC set of accessibility indicators

<b>Spatial Context</b>	<b>Basic characteristics</b>	<b>Generic type of accessibility indicator</b>		
		<b>Travel cost</b>	<b>Cumulated opportunities</b>	<b>Potential</b>
<b>Global</b>	<b>Travel</b>	<i>Access to global cities</i>	<i>Global travel connectivity</i>	<i>Global potential accessibility travel</i>
	<b>Freight</b>	<i>Access to global freight hubs</i>	<i>Global freight connectivity</i>	<i>Global potential accessibility freight</i>
<b>Europe</b>	<b>Travel (traditional)</b>	<i>Access to top ten MEGAs</i>	<i>European daily accessibility travel</i>	<i>European potential accessibility travel</i>
	<b>Travel (new)</b>	<i>Travel speed</i>	<i>Urban connectivity</i>	<i>European potential acc. intermodal travel</i>
	<b>Freight</b>	<i>Access to nearest maritime ports</i>	<i>European daily accessibility freight</i>	<i>European potential accessibility freight</i>
<b>Regional</b>	<b>Travel (Europe-wide)</b>	<i>Access to high-level transport infrastructure</i>	<i>Availability of urban functions</i>	<i>National potential accessibility travel</i>
	<b>Freight (Europe-wide)</b>	<i>Access to freight terminals</i>	<i>Availability of freight terminals</i>	<i>National potential accessibility freight</i>
	<b>Travel (case studies, tradit.)</b>	<i>Access to regional centres</i>	<i>Daily accessibility of jobs</i>	<i>Regional potential accessibility</i>
	<b>Travel (case studies, to SIG)</b>	<i>Access to health care facilities</i>	<i>Availability of secondary schools</i>	<i>Potential accessibility to basic health care</i>

## Metodologia

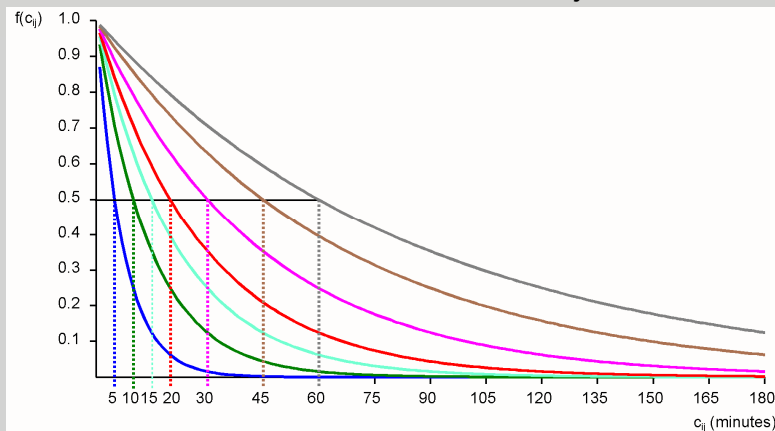
- Dostępność potencjałowa

$$A_i = M_i \exp(-\beta t_{ii}) + \sum_j M_j \exp(-\beta t_{ij})$$

$M$  – masa (liczba ludności)

$t_{ij}$  – czas przejazdu pomiędzy gminami  $i$  i  $j$

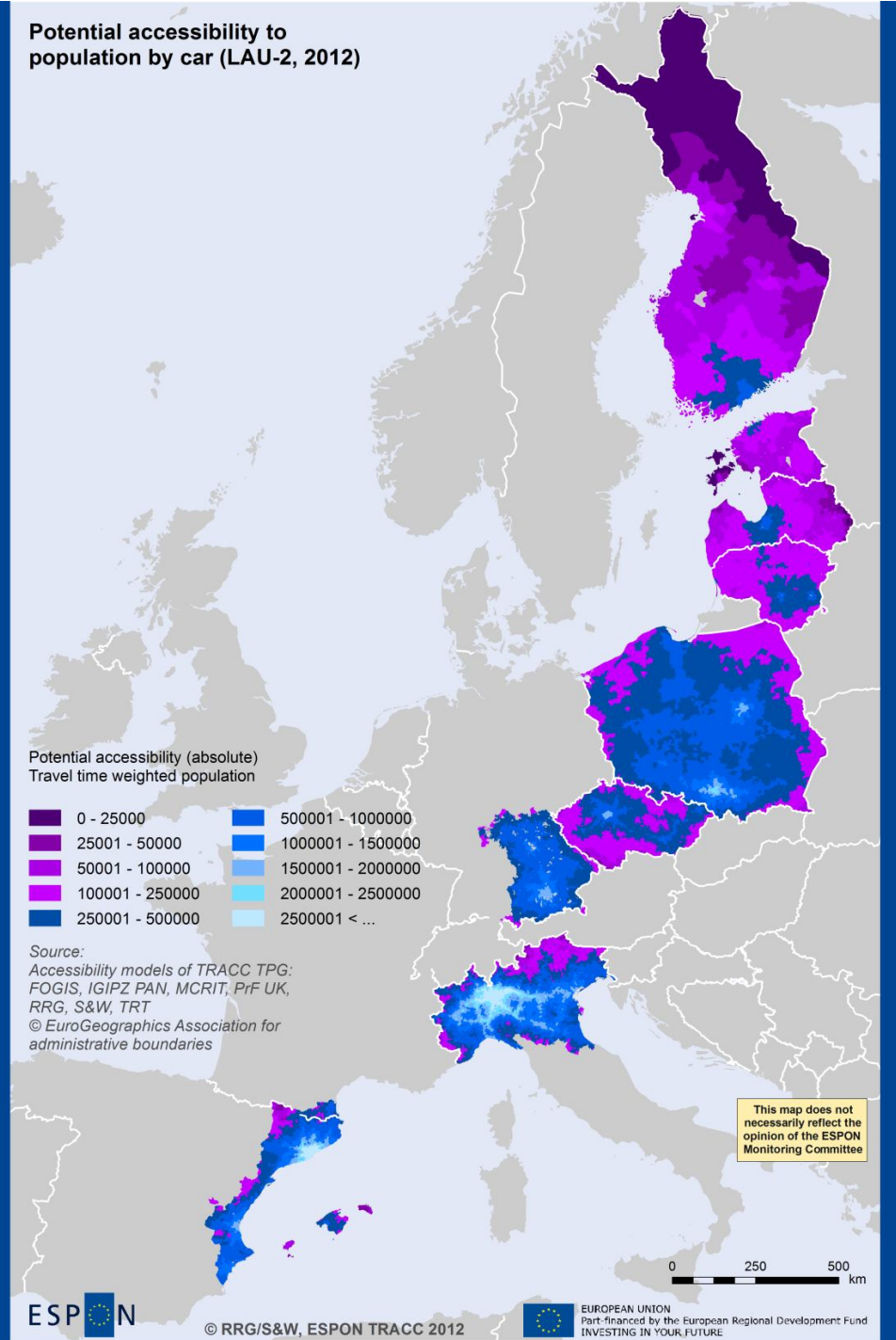
- Parametr **Beta** = 0.034657 ( $c_{ij}$  = 20 min.)



- Uwzględnienie potencjału własnego

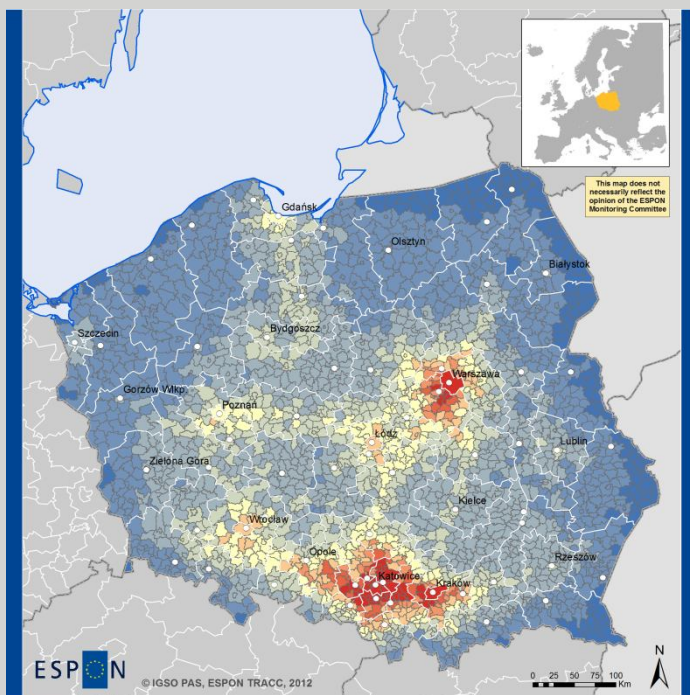
$$t_{ii} = \frac{0,5 \sqrt{\frac{S}{\pi}}}{v_{ii}} \times 60$$

Potential accessibility to population by car (LAU-2, 2012)





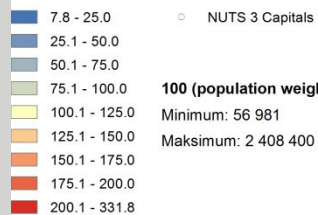
# TRACC dostępność potencjałowa (ludność): Polska



Source: IGSO PAS, ESPON TRACC, 2012  
 Origin of population data: Local Data Bank, GUS, 2012  
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## Poland Case Study

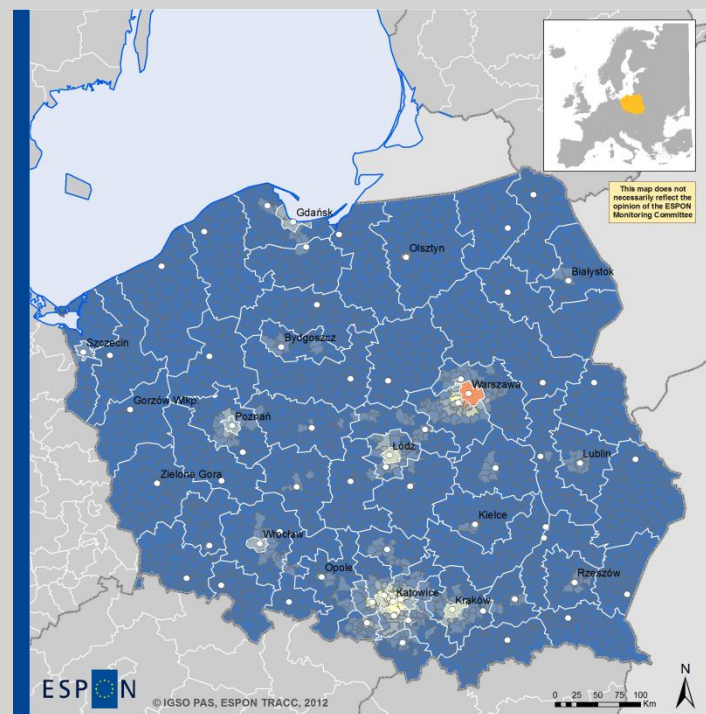
Potential accessibility to population by car ( $\beta = 0.034657$ )



100 (population weighted average) = 725 887

Minimum: 56 981

Maksimum: 2 408 400



Source: IGSO PAS, 2011  
 Origin of population data: Local Data Bank, GUS, 2011  
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## Poland Case Study

Potential accessibility to population by public transport (standardised on road average;  $\beta = 0.034657$ )

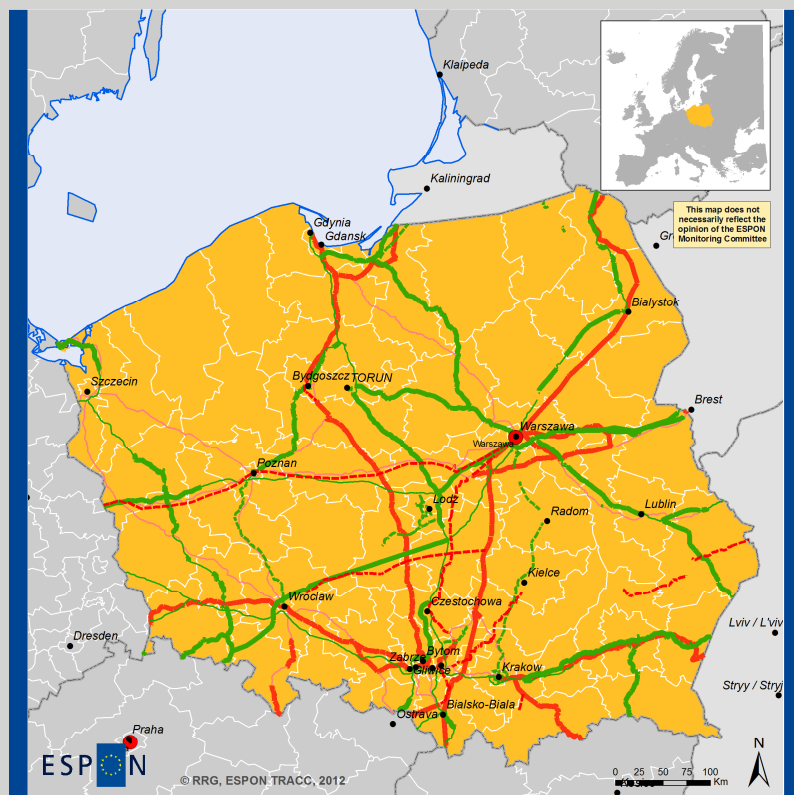


100 (population weighted average) = 725 887

Minimum: 5 535

Maksimum: 1 156 400

# TRACC: Ewaluacja TEN-T



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Source: RRG 2012, RRG GIS Database  
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## Poland Case Study Road and rail infrastructure projects

	TEN-T road projects		TEN-T rail project		Capital city
	Other road projects		Other rail project		Case study region
	TEN-T road network		TEN-T rail network		

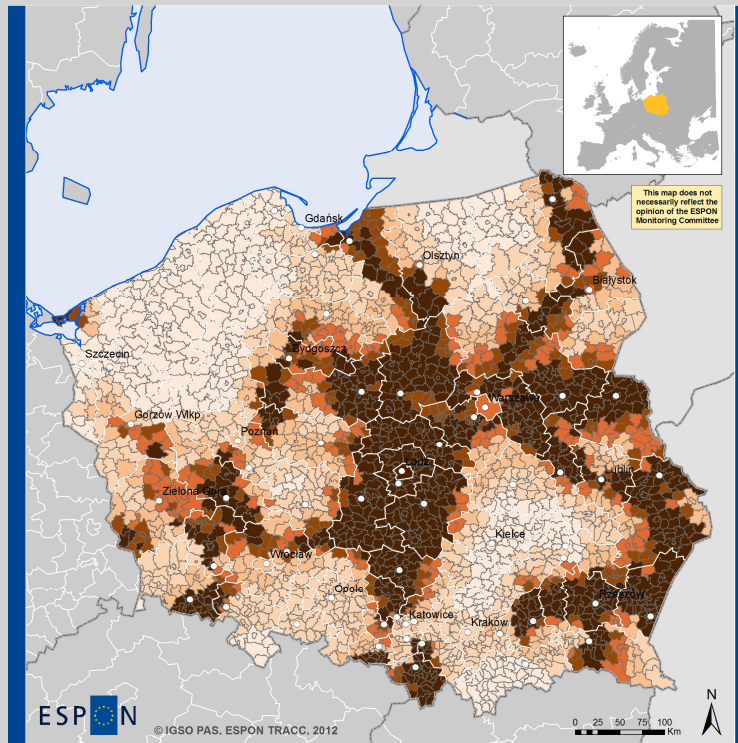
- Ukończenie „sieci” autostrad:

- A1
- A2
- A4

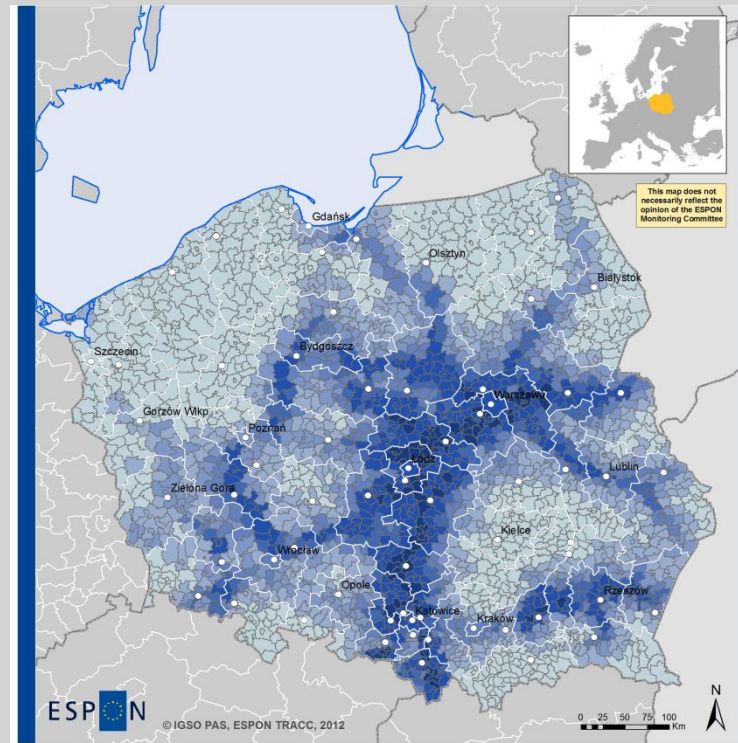
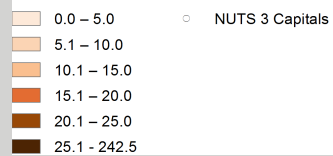
- Uzupełniająca sieć dróg ekspresowych:

- S3
- S5
- S7
- S8
- S10
- S12
- S17

# TEN-T: zmiany dostępności



**Poland Case Study**  
Relative increase of potential accessibility to population by car with TEN-T projects



**Poland Case Study**  
Absolute increase of potential accessibility to population by car with TEN-T projects



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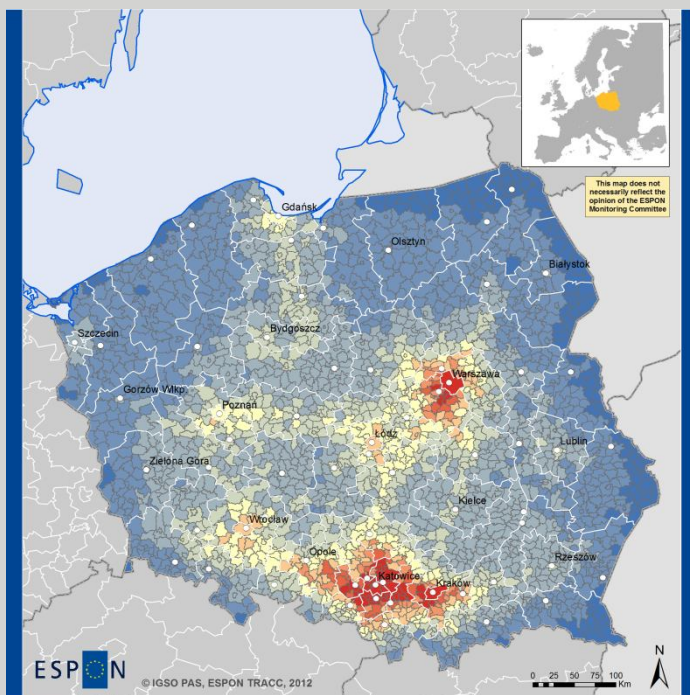
Source: IGSO PAS, 2011  
Origin of population data: Local Data Bank, GUS, 2011  
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Source: IGSO PAS, 2012  
Origin of population data: Local Data Bank, GUS, 2011  
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# TEN-T: zróżnicowanie poziomu dostępności

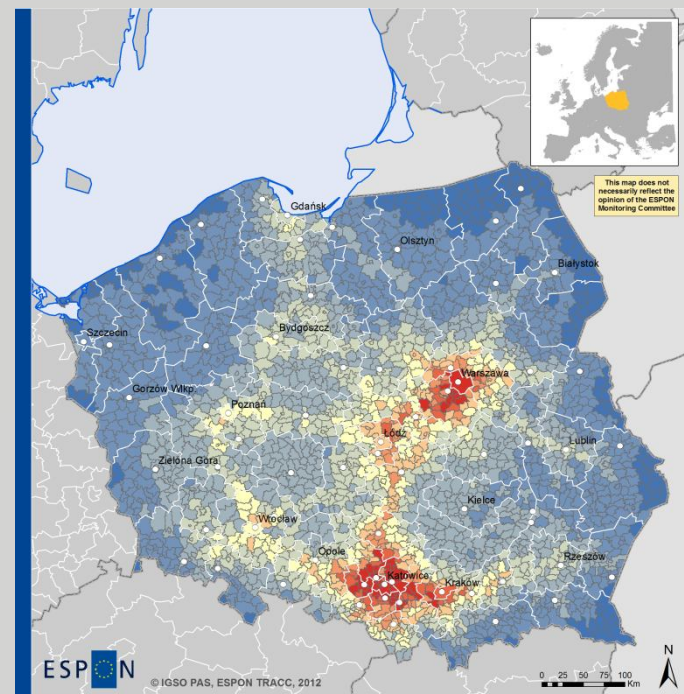


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Source: IGSO PAS, 2012  
Origin of population data: Local Data Bank, GUS, 2012  
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## Poland Case Study

Potential accessibility to population by car ( $\beta = 0.034657$ )



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Source: IGSO PAS, 2011  
Origin of population data: Local Data Bank, GUS, 2011  
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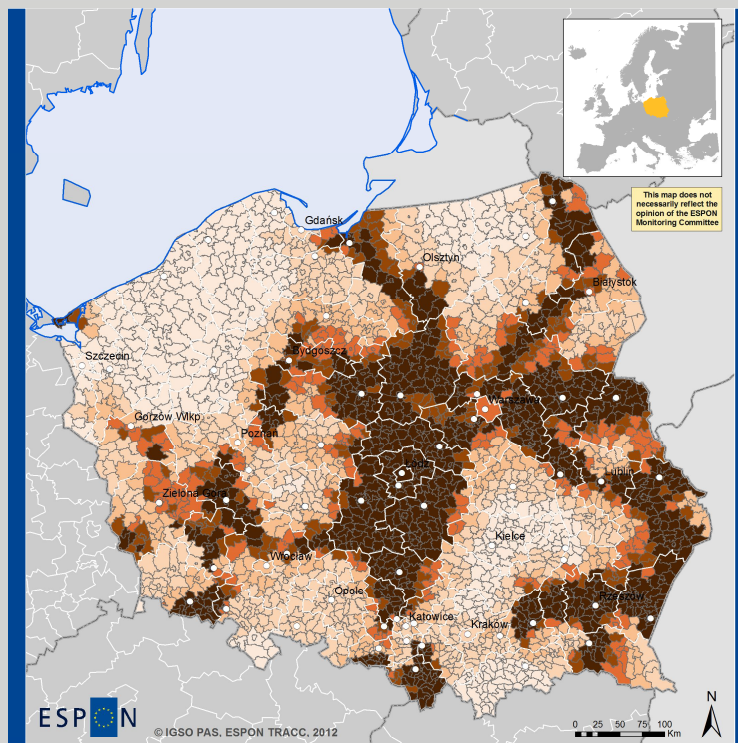
## Poland Case Study

Potential accessibility to population by car with TEN-T projects ( $\beta = 0.034657$ )





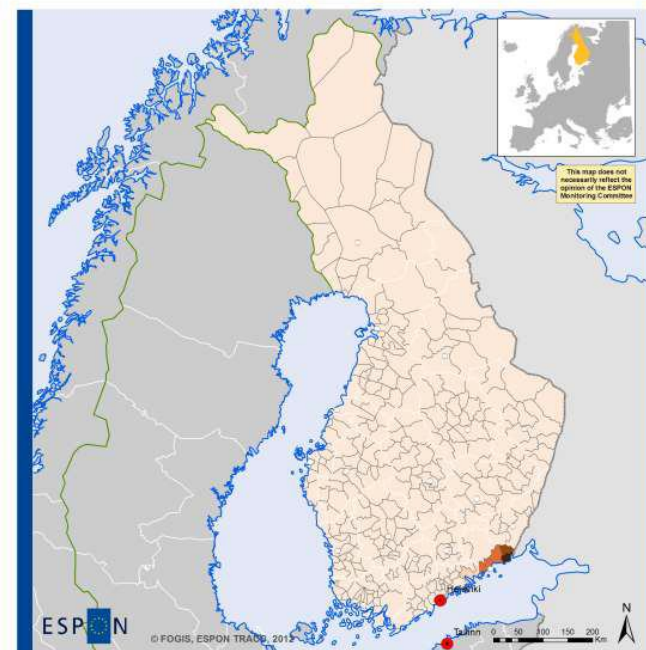
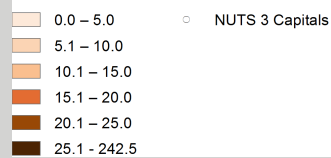
# TEN-T: punkt odniesienia



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Source: IGSO PAS, 2011  
Origin of population data: Local Data Bank, GUS, 2011  
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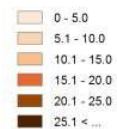
## Poland Case Study Relative increase of potential accessibility to population by car with TEN-T projects

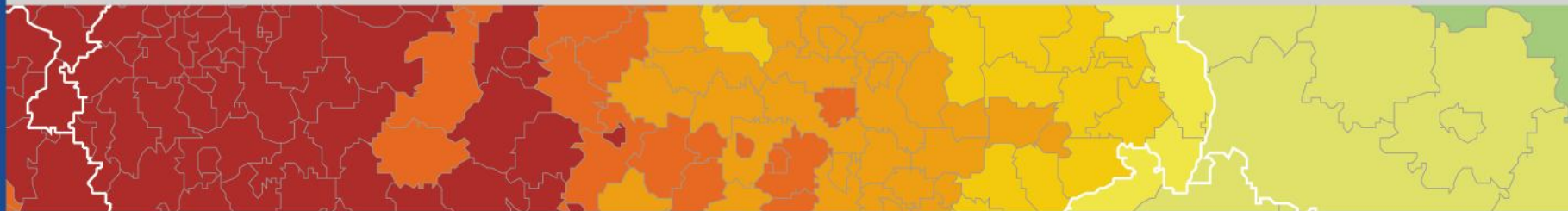


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Data source: Finnish Transport Agency, 2012; Statistics Finland, 2011, 2010  
Origin of data: ESPON Databank Project, 2010/2011  
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## Finland Case Study Relative increase of potential accessibility to population by car with TEN-T projects (municipality averages)





**Dziękuję za uwagę**

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