

Forecast and Spatial Analysis Model for Public Security



Portugal 2040. How demography influences public security planning.

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"Demography must be considered a major driver of politics [...] political scientists cannot afford to ignore demography in seeking to understand patterns of political identities, conflict, and change" KAUFMANN, E., TOFT, M., «Introduction» In *Political Demography: How population changes are reshaping international security and national politics*

- 1. Demographic trends influence political stability and security
- 2. Portugal is currently the World's sixth country with the highest ageing rate, with one of the World lowest fertility rates (two negative indicators of social and economic development dynamics of a society, and with strong impacts in the planning activities of the public policy sector, including the dimensioning and geographic distribution of security forces)
- 3. Our presentation aims to highlight the added value of knowledge coming from demographic forecasting exercise in supporting decision-making within the public policy sector

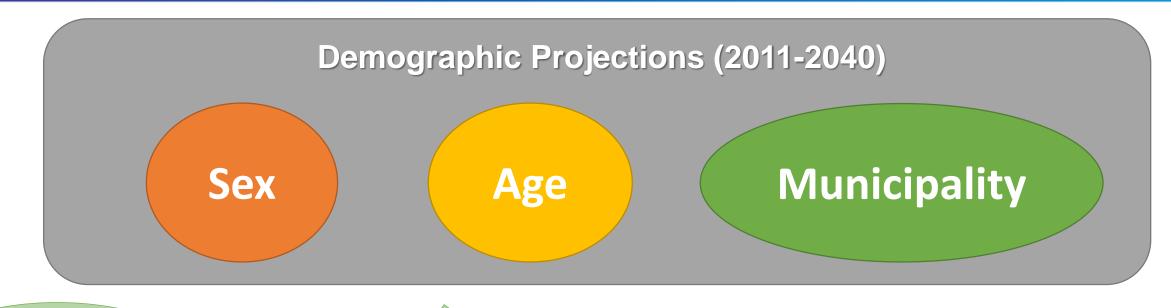


Background

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Forecast and Spatial Analysis Model

for Public Security



Specific vulnerable groups (youth and elderly) -Overlay of the output scenarios with local standards of wealth and the vulnerability of dwellings



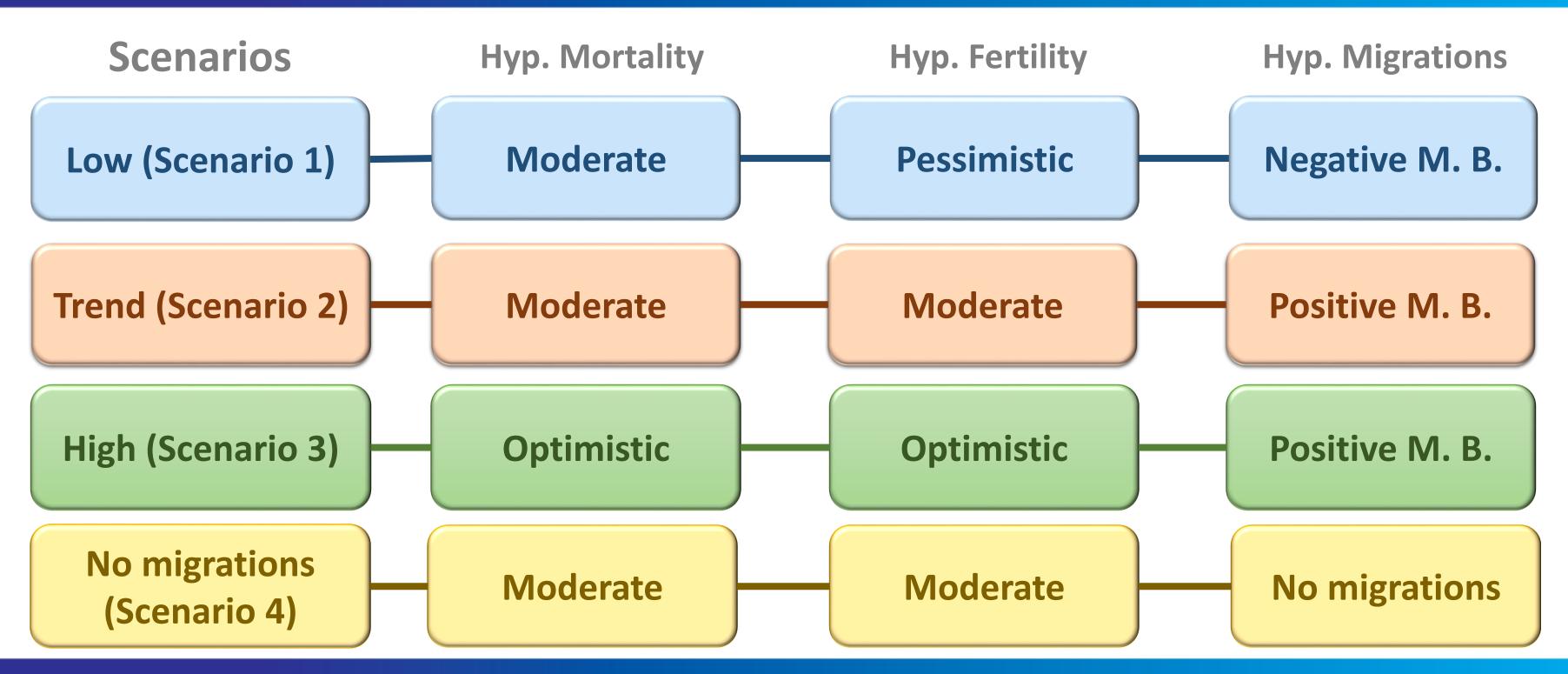
- •
- migratory tendencies

Demographic Projections (2011-2040)

Main tendencies of the Portuguese population dynamics Forecasting the impact of ageing in the population distribution Evaluating the relationship between demographic dynamics, socioeconomic changes and regional standards of wealth with

• Forecast of the future changes in the demographic structure

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Demographic Projections: Scenarios



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• Population (Continental Portugal, 2011) : 10 047 621 inhabitants

Scenario	2030	2011-2030	2040	2011-2040
1 – Pessimistic	8 931 846	-1 115 775 (-11%)	8 173 856	-1 873 765 (-18%)
2 – Trend	9 454 770	-592 851 (-6%)	9 210 083	-837 538 (-8%)
3 – Optimistic	9 533 041	-514 580 (-5%)	9 387 787	-659 834 (-7%)
4 – Trend + no migrations	9 428 233	-619 388 (-6%)	8 960 065	-1 087 556 (-11%)

Demographic Scenarios – Results: 2030 and 2040

Source: Bravo, 2016

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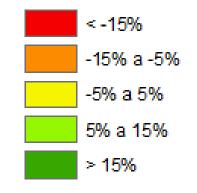
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Scenario 2 – Population variation 2011 - 2040

- Higher <u>decrease</u>:
 - Alcoutim (-55.7%) • Gavião (-44.1%) Idanha-a-Nova (-44.0%) • Castanheira de Pêra (-41.8%)
- Higher <u>increase</u>:
 - Montijo (30.4%) Alcochete (28.1%) Mafra (27.1%)

 - Arruda dos Vinhos (+35.2%)

2011-2040 variation (total)



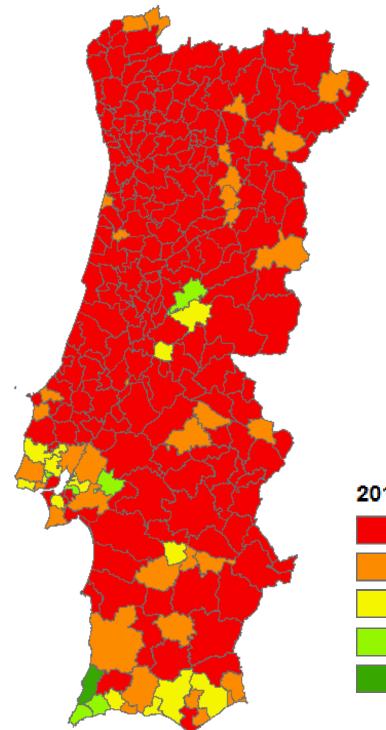
• 236 (of 278) municipalities **decrease** population

• 141 show a **decrease** higher than 15%

• Only 8 show an **increase** higher than 15%

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Scenario 2 – Population variation 2011 – 2040 (0-14 years)

- Higher <u>decrease</u>:
 - Porto (-55.4%)
 - Abrantes (-51.5%)
 - Soure (-48.3%)
 - Alcoutim (-47.8%)
- Higher <u>increase</u>:
 - Aljezur (23.4%)
 - Vila do Bispo (12.3%)
 - Odivelas (10.5%)
 - Pampilhosa da Serra (9.7%)

2011-2040 variation (0-14 yrs old)

< -15% -15% a -5% -5% a 5% 5% a 15% > 15%

• 266 (of 278) municipalities **decrease** young population

• 223 show a **decrease** higher than 15%

• Only Aljezur shows an **increase** higher than 15% (23.4%)

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Scenario 2 – Population variation 2011 – 2040 (15 - 64 years)

2011-2040 variation (15-64 yrs old)

< -15%

-15% a -5%

-5% a 5%

5% a 15%

> 15%

- Higher <u>decrease</u>: ullet
 - Alcoutim (-62.1%) • Porto (-54.9%) • Castanheira de Pêra (-54.2%) • Manteigas (-50.8%)
- Higher <u>increase</u>:

 - Montijo (25.2%)
 - Mafra (18.9%)
 - Alcochete (17.9%)

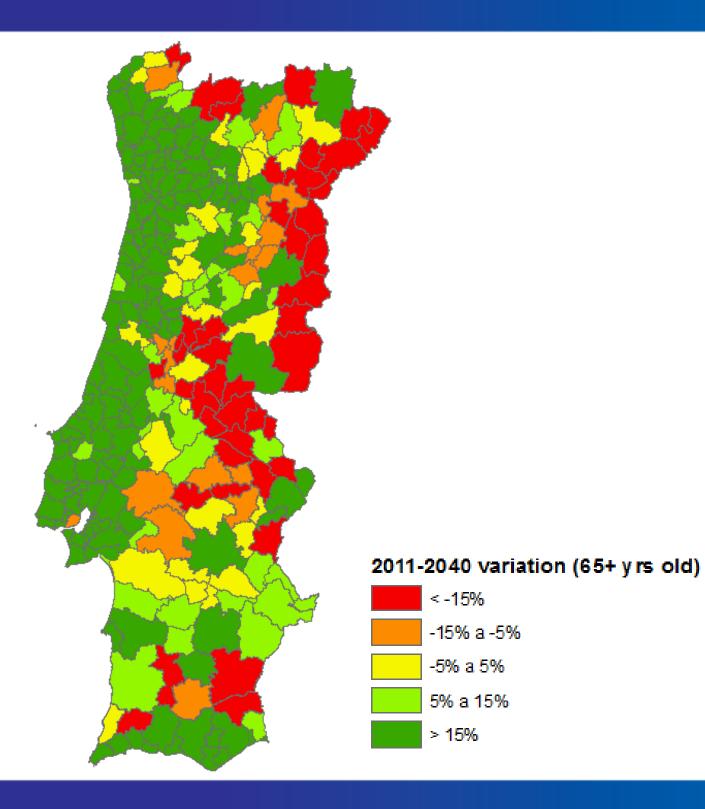
• 264 (of 278) municipalities **decrease** adult population

• 219 show a **decrease** higher than 15%

• 4 municipalities show an **increase** higher than 15%

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• Arruda dos Vinhos (31.3%)
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Scenario 2 – Population variation 2011 – 2040 (65+ years)

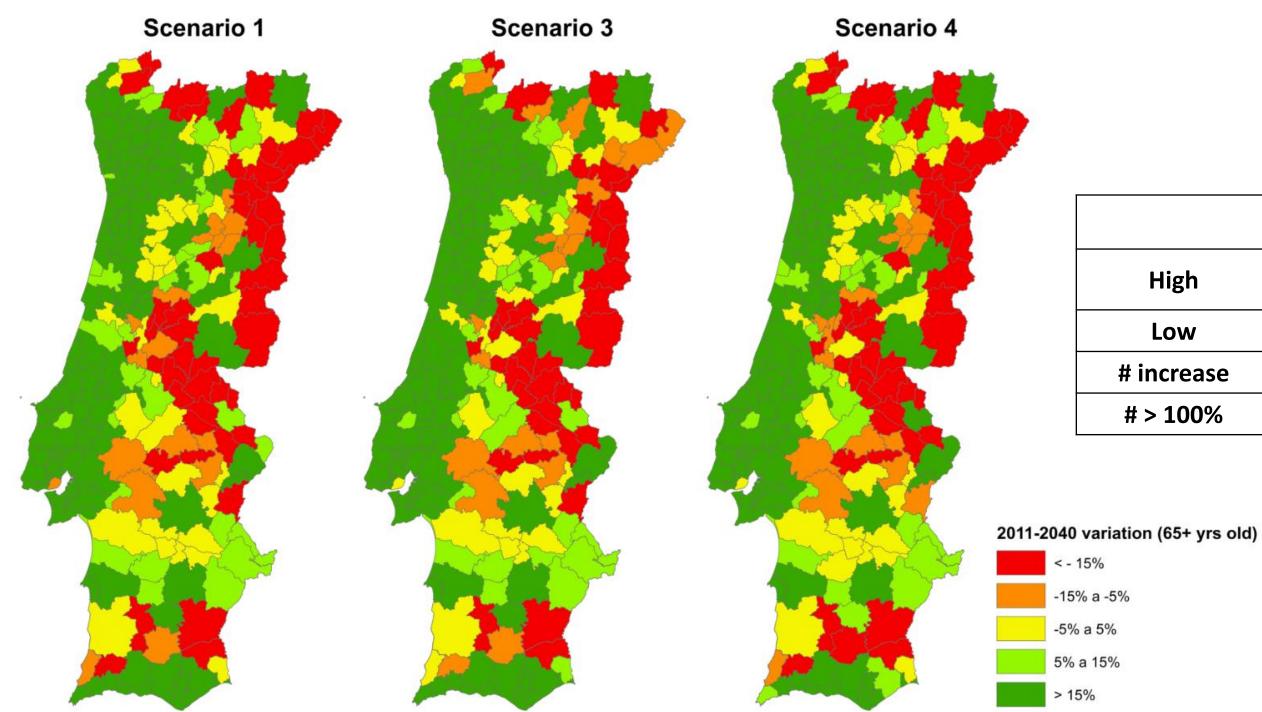
- 201 (of 278) municipalities **increase** elderly population
- 151 show a **increase** higher than 15%
- 25 show a **increase** higher than 100%
- Higher *increase*:
 - Paços de Ferreira (176.9%)
 - Vizela (172.5%)
 - Lousada (169.8%)
 - Paredes (168.2%)
- Higher <u>decrease</u>:
 - Alcoutim (-50.1%)
 - Idanha-a-Nova (-48.5%)
 - Penamacor (-47.7%)

• 43 show a **decrease** higher than 15%

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• Vila Velha de Rodão (-41.6%)
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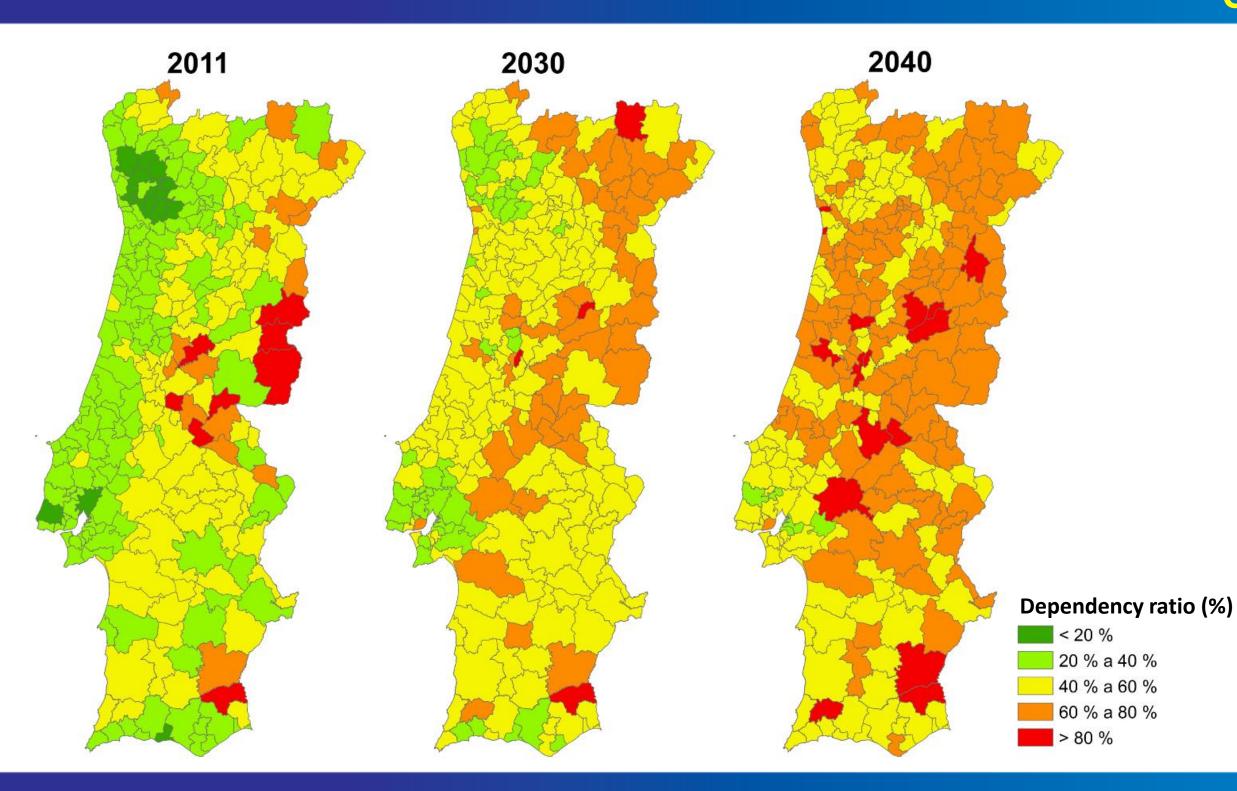
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Scenarios 1, 3 and 4 – Population variation 2011 – 2040 (65+ years)



	Scenario 1	Scenario 3	Scenario 4
High	Paços de Ferreira (174.1%)	Paços de Ferreira (185.9%)	Paços de Ferreira (173.3%)
Low	Alcoutim (-50.9%)	Alcoutim (-48.8%)	Penamacor (-48.9%)
ncrease	196	209	199
> 100%	22	26	21

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Old-age Dependency ratio (Scenario 2)

Dependency ratio = Pop 65+/Pop 15-64

- DR in Continental Portugal:
 - 29.2% (2011)
 - 56.1% (2040)
- Municipalities with higher DR:
 - Alcoutim (120.3%)
 - Castanheira de Pêra (97.5%)
 - Manteigas (94.3%)



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Change in the volume of working age people

Need to create services to support the elderly

Elderly living in less populated areas will decrease their security perception

Elderly living in urban areas will need more attention from security forces and services (SFS)



Re-planning security forces and services to proximity strategies

PORTUGAL 2040. Consequences of Ageing. The link

Reformulation of the pension scheme systems

Rethinking of healthcare systems

Adapted from Rodrigues & Castro Henriques, 2016

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Main nationalities present in Portugal (2013)

Nationality	Total
Brazil	109787
Cape Verde	42401
Ukraine	41091
Romania	34204
Angola	20177
China	18846
United Kingdom	16471
São Tomé and Príncipe	10304
Moldavia	9971
Others	98098

From EU, USA, Canada and Northern Europe countries:

- Average or high qualifications
- Education, health and management

From other European and South American countries:

- Medium qualification
- Service sector (retail trade, restaurants, tourism)
- Sporadically occupy management positions

From African and Asian countries:

- Low qualifications
- Service sector (cleaning, small retail, construction, agriculture)

Migrations (2011 – 2040): a solution?

	2011/2016	2016/2040
Pessimistic Scenario	-159 875	-490 000
Moderate Scenario	-137 900	50 000
Optimistic Scenario	-107 900	750 000

Source: Rodrigues & Castro Henriques, 2016

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Strengths

- Mitigation of the demographic ageing (top and bottom)
- Positive impacts on fertility •
- Population increase in young working age
- Economic development and increased consumption •
- Increase of cheaper, younger, and more flexible labour supply, which fosters productivity gains
- Strengthening of natural identity, understood as "super identity"

Opportunities

- Reducing the population decrease in interior areas
- Greater demographic mechanism
- Full integration of skilled labour with training and knowledge
- Streamlining the working population
- Contribution to the public State accounts
- Taxes paid by legal immigrants exceed the social benefits they have access, such as education and health
- Positive impacts on local economies

Foreign Population in Portugal. SWOT Analysis

Weaknesses

- Decrease of the average levels of education
- Decline in average skill levels of the workforce
- Difficulty to access to certain services
- Change of the social structure, which enhances tension
- Inability of the labour market to take advantage of immigrant human resources
- **Increase in illegal/irregular situations**

Threats

- Ease of insertion in the informal labour networks
- The existence of people in illegal situation has negative impacts on public finances
- Increased sense of insecurity and intolerance towards diversity
- Pressure on health, education, employment and social security systems
- Strengthening of welfare regional asymetries
- Polarising effect of the Metropolitan Area of Lisbon

Increase of complexity of the immigrant's profile

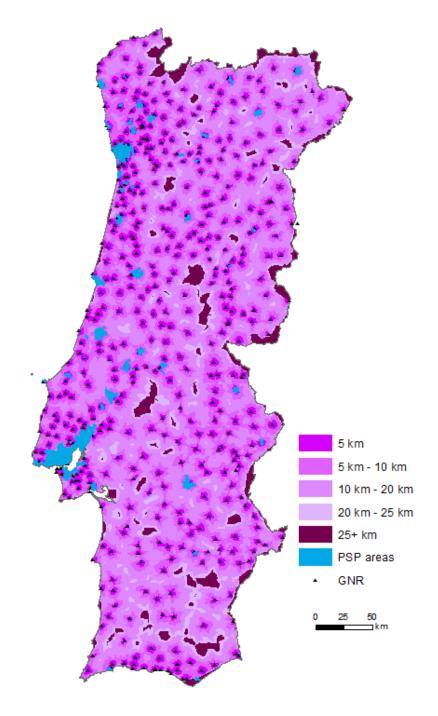
• Increase of the percentage of illegality, increased vulnerability and social, economic and cultural differentiation hindering social integration

Adapted from Rodrigues, 2010

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- General decrease of total population: -7% (scenario 3) to -18% (scenario 4) 1.
- 50% increase of elderly residents (2011-2040)
- 3. Dependency ratio (2040): 56.1%
- 2011: 4.
 - 14% of population lives further than 10 km of police 1.
 - 15% of elderly lives further than 10 km of police 2.
- **5.** 2040:
 - 14% of population lives further than 10 km of police 1.
 - 10% of elderly lives further than 10 km of police 2.
- 6. Areas with less visibility of security forces should be prioritized with proximity policies, especially in Alentejo, since the general decrease of population will affect the security perception of the elderly: elders living alone or accompanied by other elders

Final Remarks (1)



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- 7. Portugal has a highly ageing population; this is a process difficult to reverse within the current social and economic context
- 8. Migration has been seen as a way to mitigate the ageing phenomenon, through the increase of young and working population; however, the increase of the immigrants' profile complexity leads to a bigger felling of insecurity and intolerance which can be intensified in the next decades
- 9. Responses to this predictable future scenario make urgent to adequate new public policies to the coming "new residents" in Portuguese territory. And this adjustment must be done urgently in the form of public policies, as their results will not be felt in the short term
- 10. Demographic ageing has impacts on public policies and in the planning of security forces and services. In order to assure a higher level of security perception amongst most vulnerable residents (youngster and elderly), proximity policies and specific programs should be implemented



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More information regarding the project is available at our website:

http://sim4security.novaims.unl.pt/M

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RODRIGUES, Teresa & CASTRO HENRIQUES, Filipa (2016). Re-birth. Demographic challenges facing Portuguese society. Plataforma para o Crescimento Sustentável (Coord). Wilfried Martens **Centre for European Studies**

Thank you!



