

## **Population decline and climate change create opportunities for the South of Limburg**

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*50 years from now the population on the NL will be about the same as now, around 16,5 million people. But 25 years from now it will be higher, about 17.1 -17.5 million. This increase will be occur in the cities in the West of the NL (mostly below sea level) , while the North, East and South (above sea level) will show decline.*

Population decline (also called crimp) creates both threats and opportunities, especially for the areas with a declining population.

Limburg is one of the three areas on the periphery of the Netherlands where the population decline is already a fact. Of the 10 cities in NL with the largest relative decrease in inhabitants, 6 are situated in South Limburg. (Vaals, Kerkrade, Nuth, Simpelveld, Landgraaf, Meerssen. In the whole province of Limburg the number of people will fall between 2010 and 2020 with 4 %. The number of households will decrease with 2,3 %.

But in the south, especially in the Parkstad area, a city band comparable to the western part of the NL (the Randstad) the number of people will decline between now and 2040 with 20 %, while the number of households will remain stable until 2015 and then decline with 15 % until 2040.

This will lead to unoccupied houses up to 30 % and house prices will fall in the cheaper districts with 15 to 20 %.

For the water management and covering the costs this means that taxes for sewage transport and sewage treatment, but also the cost for drinking water preparation and transport will increase with the mirror percentage of the decline. This is caused by the fact that the variable part of the taxes will become smaller and smaller, while the fixed part remains because the infrastructure is already there and the investments have to be repayed and the infrastructure maintained. It is often thought that less people produce less waste and use less drinking water. This is of course true, but with infrastructure in place, a decrease of the amount of waste water on a sewage treatment plant of 0,3 % per year will not make the treatment any cheaper. So less people have to pay for the same infrastructural investments.

The prospect of economic and demographic crimp might inspire to turn policies and to start investing the profits of natural gas in the higher parts of the NL, off loading some of the climate change pressures on space and population from the West, using the potential of the North, East and South and enhancing cooperation with neighboring countries.

With a diminishing population the costs for water management will not decline, and to maintain the nation wide defenses against floods might need an new solidarity tax for the more populated areas. With continuing climate change it may be necessary to move infrastructure, dwelling and business away from inundation areas and place them on higher grounds. Space will be available through redevelopment of crimp areas using the opportunity to remove the least attractive parts of town districts.

### The population will not continue to decline!

The grey wave will only last until 2040 because by that time the baby boom generation will have been decimated and almost be extinct.

After 2040 the dominance of retired people will therefore decline.

So better try to incorporate spatial planning and housing wishes for after 2040 in the housing plans that are developed in the next 30 years.

#### Finance of water management in times of population decline:

The water finance of the water authorities will have to continue to pay for the investments that are already laid out. This means that the little amount of waste water that is produced less throughout the area cannot be translated into smaller waste water treatment facilities. Costs remain more or less the same.

A decline of e.g. 1,5 % of the population per year will probably mean a decline of the number of household of 0,6 % per year after 2015.

As the water taxes are momentarily paid by the households, this tax will rise with the same % as the number of households declines.

It also means that the structure of the rate (the pricing of water) will shift more and more to the fixed part and the flexible part that can be influenced by the consumer will decrease.

Indeed, the same amount of money is needed to cover the not declining costs.

With the present figures and estimates this will mean about 0,5 % raise every year, which means a raise on the price of sewage treatment of 5 % in 2020 and 16 % by 2040.

The tax to be paid for the water system management (maintenance of streams and rivers, protection against floods) will hardly change because the number of taxable units (based on property and surface area) is predicted to hardly change in this period (from 312.000 in 2010 to 300.000 in 2040). This is only about 4 % in 30 years.

#### Growing challenges in water management caused by climate change; what risks and disturbances do we accept?

In future the amounts of precipitation in the river basins of Rhine and Meuse may well be so large that the present protection levels in Limburg of 1:250 (after 2018) and 1:50 (present) can not be met. When we don't want to raise our defenses even higher (thus also increasing the risk of flooding more downstream) we have to accept lower levels of protection, or the fact that we will get our feet wet once in while (like in Cologne and Bonn, where it is already accepted and wooden side walks are temporarily constructed at the first level above street level).

More structural, it might be considered to remove infrastructure and potentially threatened dwelling and business from the inundation area and place them on higher grounds. Space will be available through redevelopment of areas where crimp has led to opportunities to remove the least attractive parts of town districts. This creates opportunities to combine future necessities to move businesses and people away from the flood areas with the settlement of new business and people in areas with decreasing numbers of people.

#### Dutch solidarity

The protection against floods from the sea and the large rivers is provided by the Dutch National Government that take their responsibility by building dykes and levees and maintaining the protection through the dunes, e.g. by replenishment of sand at the coastline. This is financed through the line of the income tax. The protection levels are highest in the western part of the Netherlands where the bottom levels are lowest. But there is also a misunderstanding that the largest part of the Dutch economy depends on the productivity of the Randstad. Only ca. 46 % of our Gross National Product is earned in the Randstad by ca. 46 % of the Dutch population that lives in the 4 provinces. About 88 % of the natural gas profits earned in Groningen has been invested in the infrastructure of the Randstad, keeping the west safe and up to date, although its traffic lanes are constantly clogged. The north, east and south of the NL are the areas with crimp (both economic and demographic) and the present statistics keep predicting population growth in the Randstad and population decline in the other parts of the NL. Yet, Europe is closer to the east of the NL and one might try to

turn policies and use the position of Limburg in the centre of the geo-economy between Randstad, Rhein-Ruhrgebiet in FRG and Flanders.

The eastern part of the NL is also situated higher than the west, and continuing climate change, sea level rise and subsidence will demand more and more measures to ensure the protection levels. Lets not make the mistakes made by the planners of the Three Clove Dam in China starting with a protection level of 1:10.000, changing it within a few years to 1:1.000 and recently further reducing it to 1:100.

Spatial planning on a national scale might act wise by studying the possibilities to off-load some of the pressures on space and population from the West and use the potential of the East and North of the NL. Using the possible orientation and cooperation with Germany.

The high protection levels for the west of the Netherlands have been financed by national taxes, demanding solidarity of the total population, which means that people in the higher areas have paid and pay for the measures in the low parts. It is time this solidarity is also demanded the other way around: more national investments should be directed to the areas with population decline, admitting that there is a large economic potential in the higher parts of the country.

In the first week of August 2010 an inspiring document was published by the Ministry of Economic Affairs (Ondernemend met krimp: <http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2010/08/05/ondernemend-met-krimp.html>) presenting us with many examples for enterprising with population decline. And in April 2010 a study on the restructuring of Parkstad was published (<http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2010/04/28/eindrapport-mkba-herstructureringsaanpak-parkstad-limburg.html>) trying to point out opportunities to turn the social decline around.

Three main courses or principles apply and are described in report of the Min. of Econ.Affairs:

**Combat;** attract new inhabitants, retain them; hold on to the new people and retain the enterprises; invest in the housing and restructure the town districts. Try not to go into competition with neighboring regions.

**Adjust :** accept crimp, adjust the ambitions for numbers en the composition of the population. Aim at conserving the quality of the society, even with less economic and social provisions. Invest in multifunctional accommodations, ICT, Smart homes.

**Use:** pressures on space diminish and create new opportunities; chances for a more balanced distribution of functions within a region ; perhaps a new profile for the region; economic initiatives to innovate and strengthen business activities.

Many examples are given but I will restrict myself to two per principle :

**Combat:**

- Cross border business area without borders, new energy, care and cure, (electro)mobility and combining work and housing. Attracting employees in both countries and distributing products in both countries.
- Attract new inhabitants, retain them; hold on to the new people and retain the enterprises; invest in the housing and restructure the town districts. Try not to go into competition with neighboring regions.

**Adjust:**

- Projects aimed at conserving knowledge in a company: master-apprentice, knowledge risk assessment, peer to peer interviews.
- Accept crimp, adjust the ambitions for numbers en the composition of the population. Aim at conserving the quality of the society, even with less economic and social provisions. Invest in multifunctional accommodations, ICT, Smart homes,

**Use:**

- Cooperation between similar partners, pooling employees, joint marketing of products in regional promotion of the individual and combined activities (e.g. museum, festival,

shopping, sports, zoo, etc), thus branding the region and changing from daytrips to lodgings.

- Healthcare tourism: restructure previous farm buildings (partly) to hotel accommodations. Provide country care for patients too good to stay in hospital and too weak to go home, including their family. This may concern people waiting for a place in a care centre, handicapped or chronically ill people. Combine this with restaurant and recreational facilities.

If one cannot stop the population decline, accept it and aim at the conservation of the quality of the society. There are many possibilities.

In the South of Limburg especially using the beautiful landscape, the chance to find leisure and quiet, but also making it attractive to stay for a few days instead of rushing back home after an event.

Even attracting people from abroad may be a tool to replenish some numbers. The University of Maastricht is now recruiting in Great Britain and aiming at a few hundred students annually to come to Maastricht to study. However, after finishing a study there must be a job! Create these jobs and make it worthwhile to stay or, when one studied elsewhere, to return to Limburg.

**The above is partly based on the following literature recommended for further reading (in Dutch):**

- 1 Min. Economische zaken(Berenschot), 2010. Ondernemend met krimp! Handreiking economische bedrijvigheid bij bevolkingsdaling, pp. 64.
- 2 Haskoning, 2007. Vergrijzing en bevolkingskrimp: crisis of kans, pp.30.
- 3 Provincie Limburg, 2008. Demografische Proefregio Limburg: ruimte voor vernieuwing. Over de vernieuwingsvraagstukken die demografische veranderingen in Limburg met zich mee brengen, pp. 27.
- 4 RIGO & EIB, 2010. MKBA Herstructureringsaanpak Parkstad Limburg., pp.89.
- 5 Dam, F. van, C. de Groot & F. Verwest., 2006. Krimp en Ruimte, bevolkingsafname, ruimtelijke gevolgen en beleid. Ruimtelijk Planbureau, Den Haag, pp.214.
- 6 Dam, F. van, C. de Groot & F. Verwest, 2007. Groei, krimp en ruimte. Demos, 23, 1-5.
- 7 Renooy, P., M. de Groen & J.Klaver, 2009. Verkenning Rijksagenda Krimp en Ruimte, pp.83.
- 8 Min. BZK (Rijk, VNG, IPO) ,2009. Krimpen met kwaliteit, pp. 60
- 9 Ontwerplab Krimp, Dongeradeel (Friesland), 2008. Krimp biedt ruimte, pp.88
- 10 Schuppen, S. van & J.D. Dorrepaal, 2008. Zeven misverstanden over krimp en ruimte. Christen Democratische verkenningen herfst 2008, pp.6.
- 11 Buitenhuis, I., 2010. Krimp nader toegelicht. SAB, [www.sab.nl](http://www.sab.nl), pp. 3

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