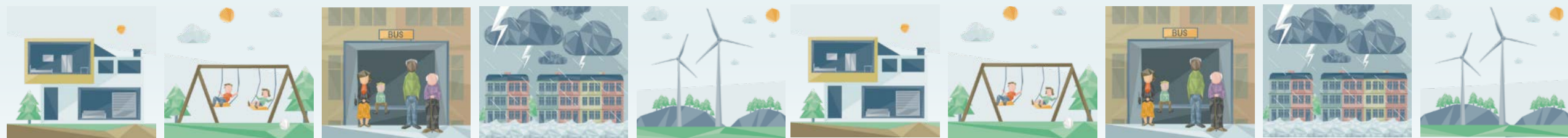




The challenges of spatial planning in Luxembourg

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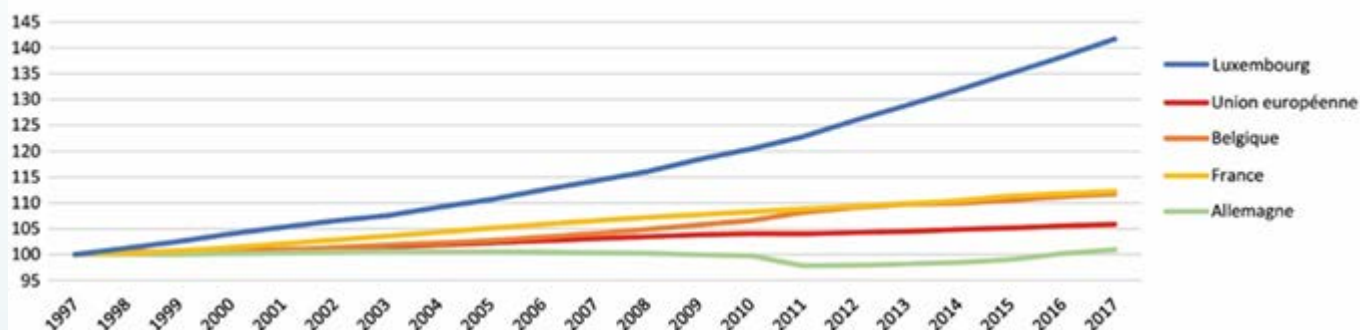




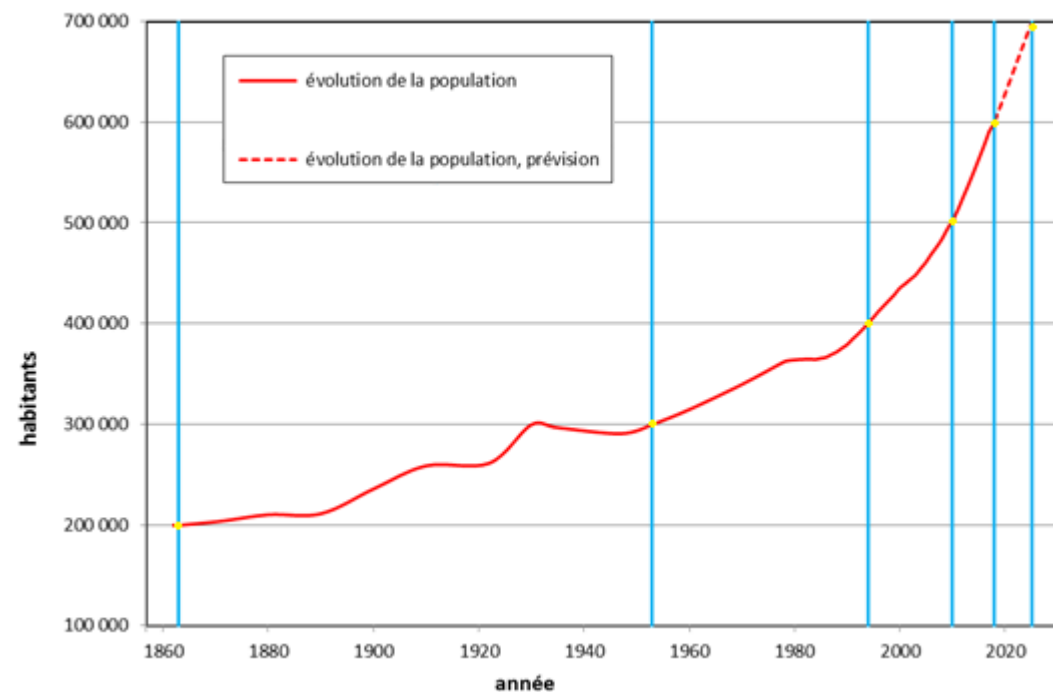
Unparalleled population growth

In relative terms, Luxembourg has the **highest rate of population growth in Europe.**

Croissance démographique depuis 1997 (en base 100 = 1997)



Nombre d'années pour une augmentation de la population de 100.000 personnes



- 🇱🇺 2010 – 2017: annual growth rate of **2,34%**
- 🇱🇺 Population has grown by ca. 100 000 in only 8 years.
- 🇱🇺 Population growth and economic growth have decoupled.






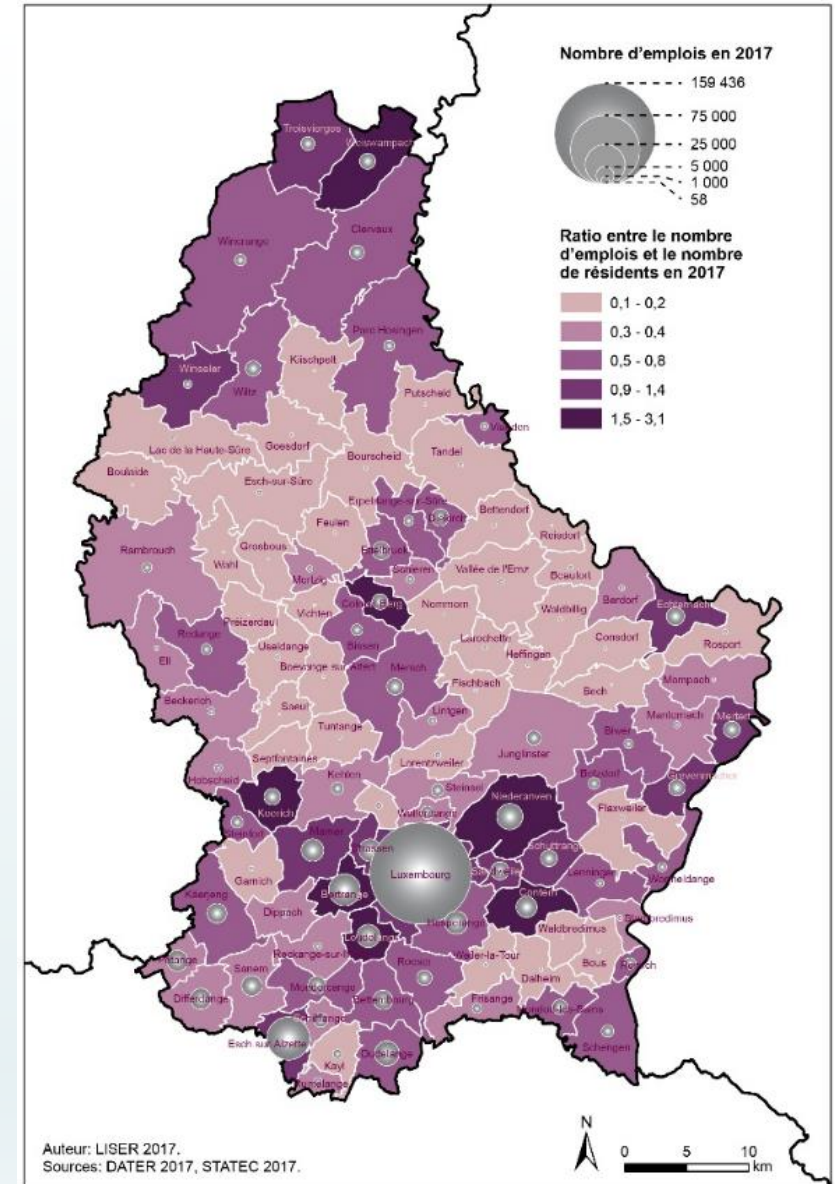
Jobs, jobs, jobs

In 2017, there were \pm **400 000** jobs in total.

37% of all jobs (\pm 160 000 jobs) were located in **Luxembourg-City**.

Evolution of the number of jobs 2002–2017:

-  Functional urban area **Agglo Lux**: increase of 32%
-  Functional urban area **Agglo South**: increase of 95%.
-  **Rural areas**: increase of 89%.





Interdependence between the Greater Region and Luxembourg

± **400 000** jobs in total (2017):

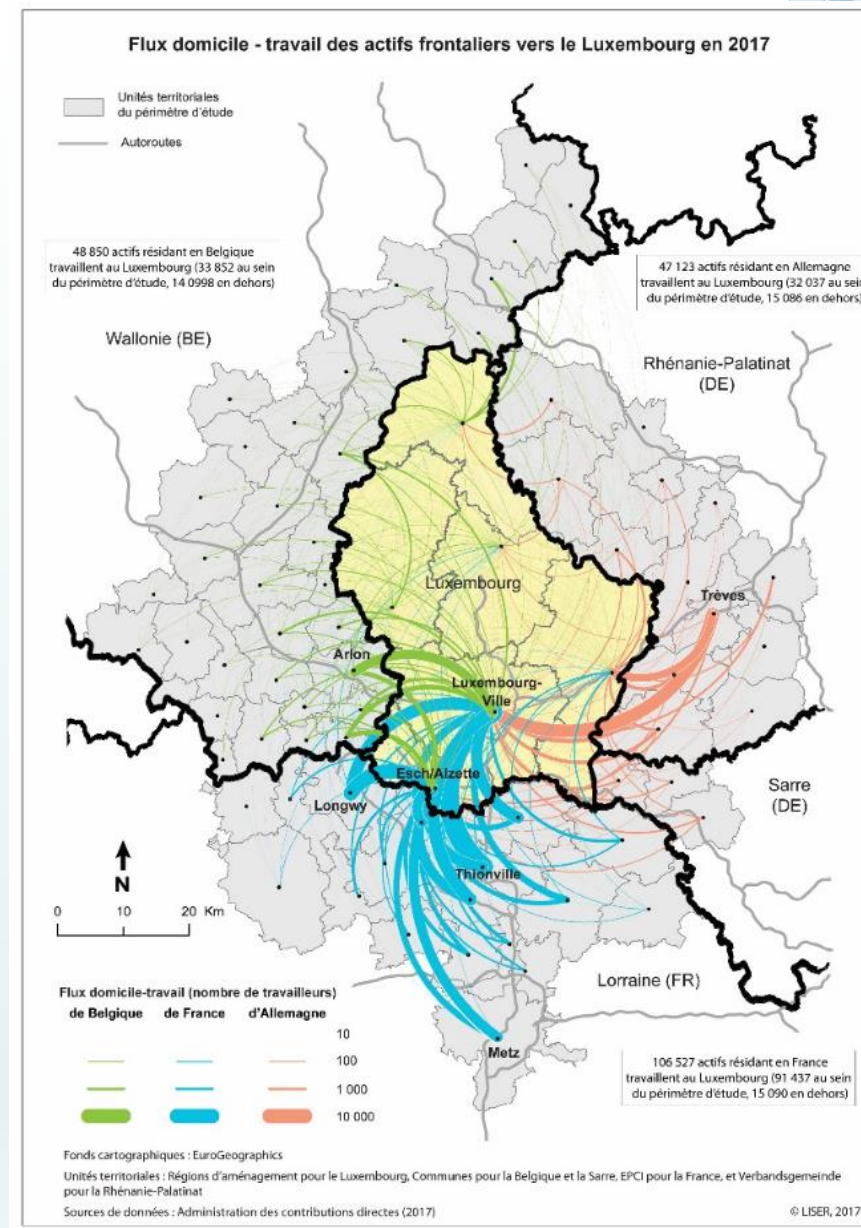
± **180 000** daily foreign commuters

- 52 % from France
- 24 % from Belgium
- 24 % from Germany

± **220 000** residents

- 50 % foreign residents
- 50 % Luxembourgish residents

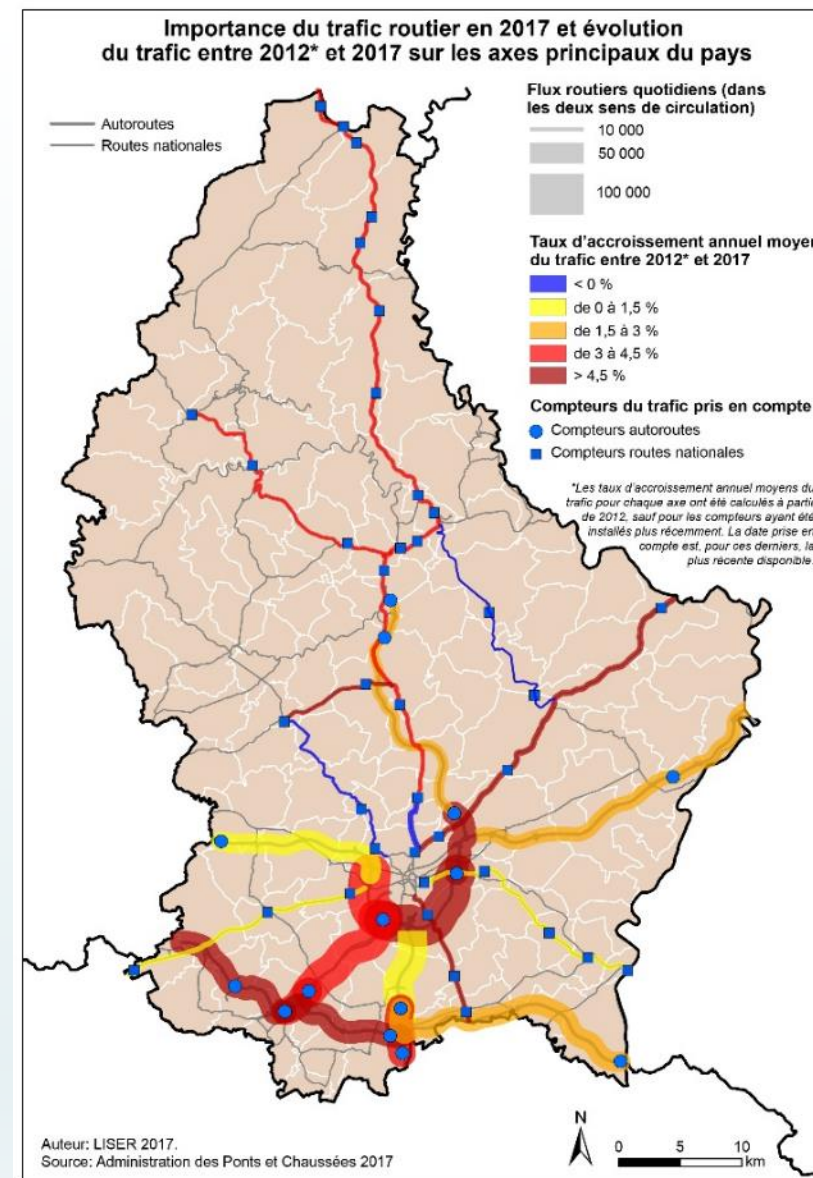
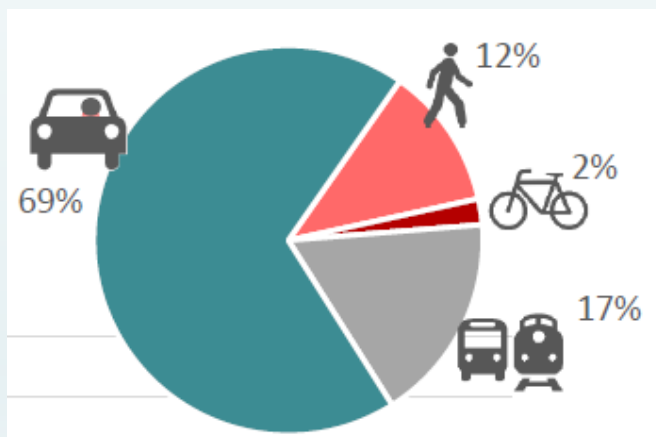
Mobility?





Luxembourg is stuck in a traffic jam

- Motorised transport has increased by **15%** between 2007 and 2015.
- On some sections of the road network, **traffic is increasing** by more than **4,5%** per year.
- Dominance of the car: 2/3 of all journeys from home to the workplace are by car.

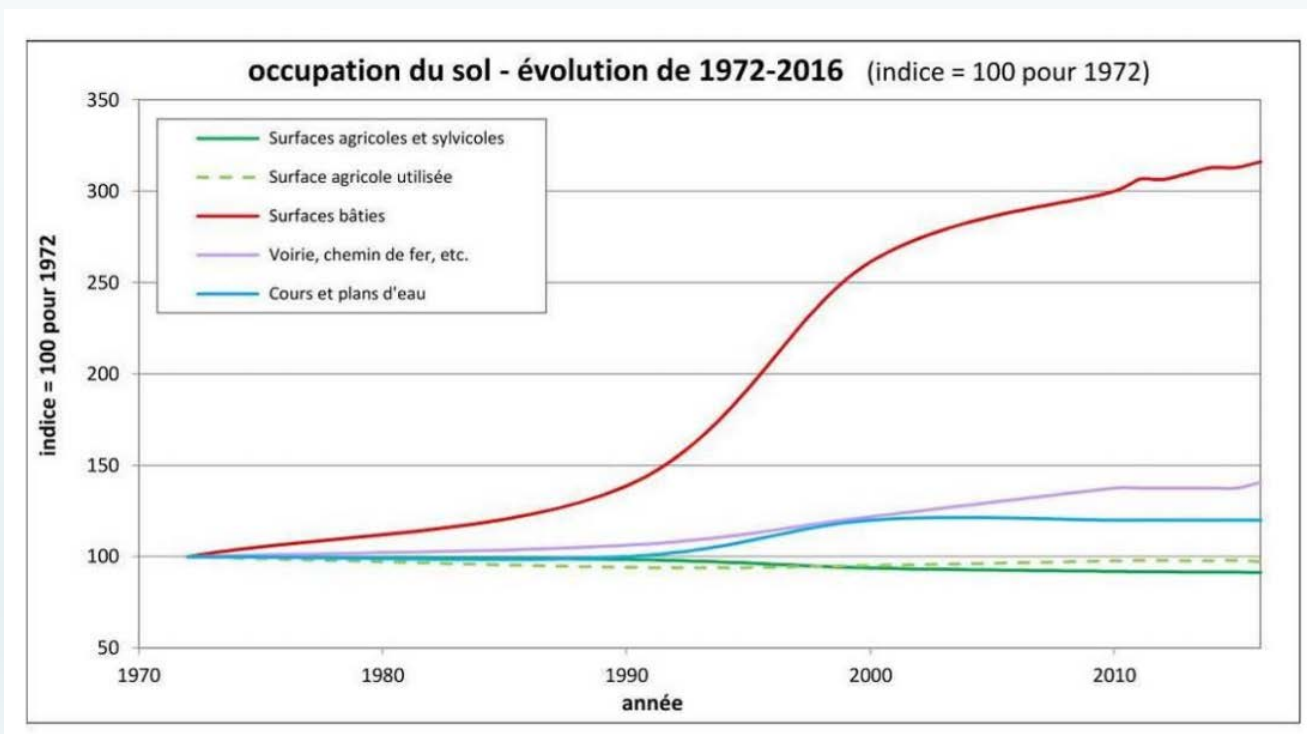
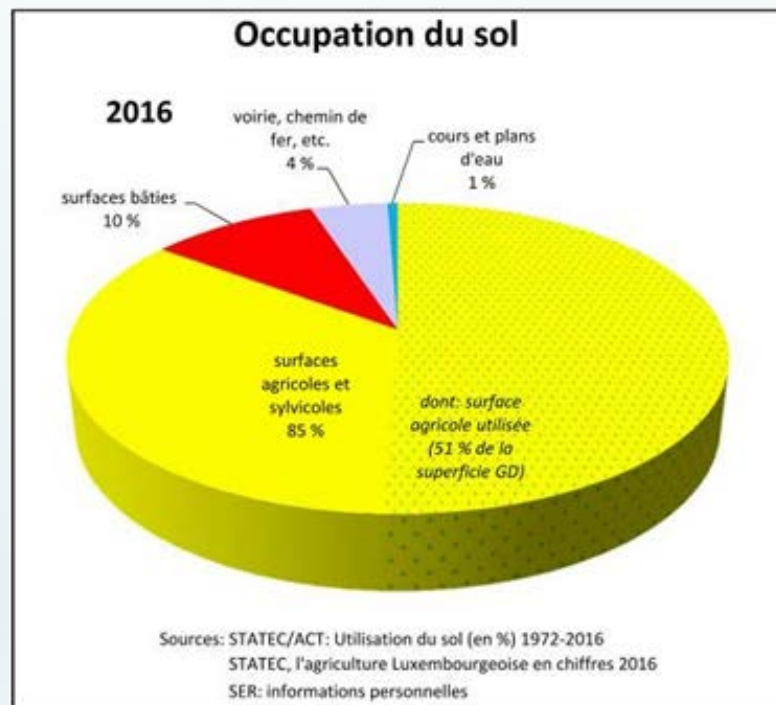




Land cover and soil sealing

In relative terms, the **share of impervious surfaces** (built-up areas and road/rail infrastructure) has increased from **6%** in 1972 to **14%** in 2016.





In absolute terms, the land covered by built-up areas has more than tripled from 1972 until 2016.





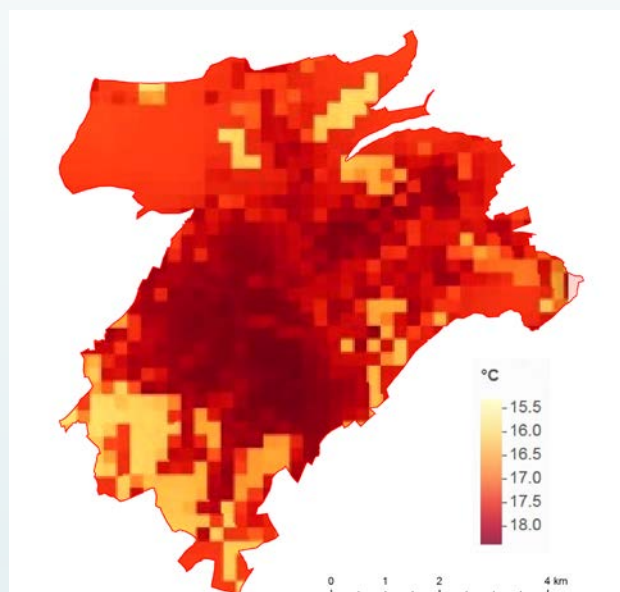
Vulnerability to climate change

Impacts and risks of climate change:

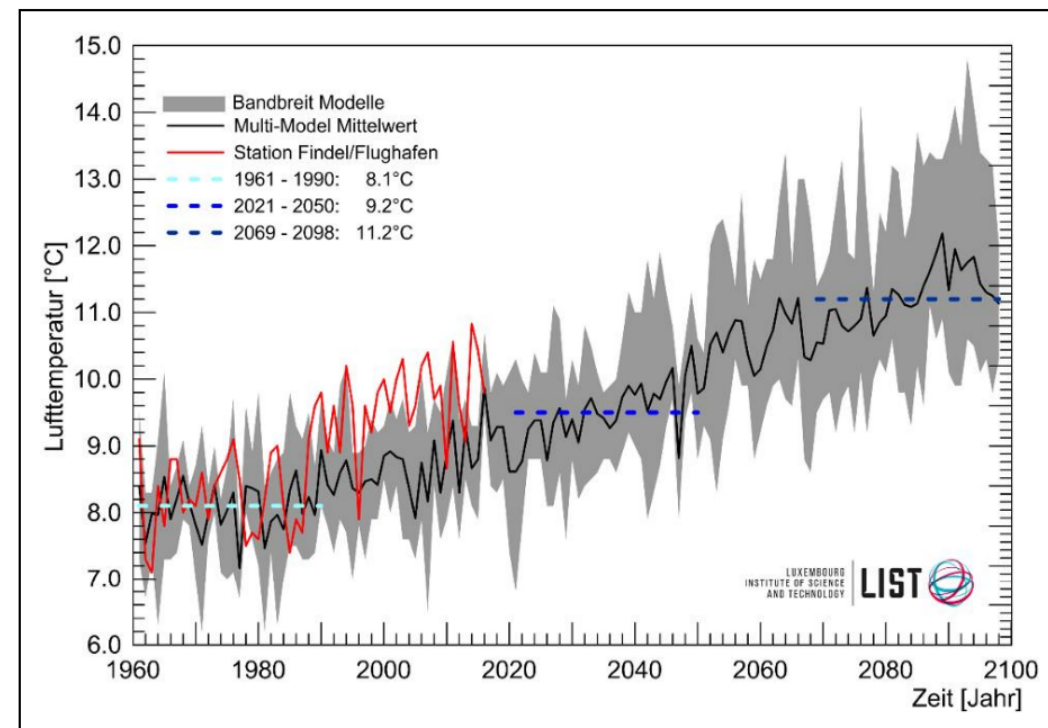
-  Predicted increase of average annual temperatures (from **8,1 °C** in 1961-1990 to **9,2 °C** in 2021-2050)
-  Heavy rain and flooding
-  Soil erosion and landslides
-  Urban heat island effect



Vallée de l'Ernz (2016)



Urban heat island effect in Luxembourg (average temperature at 00:00 CET during summer 2011, UrbClim model PIK)



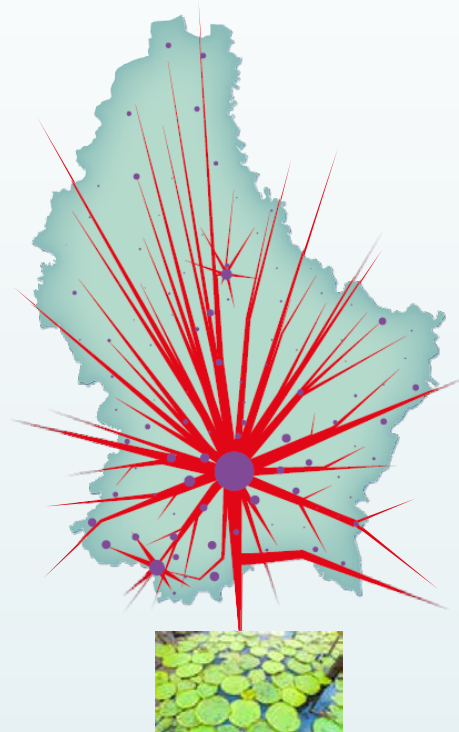
Évolution de la température de l'air pour le Luxembourg, basée sur un ensemble de projection climatique. Période de 1961 à 2098. Source Junk et al. 2012



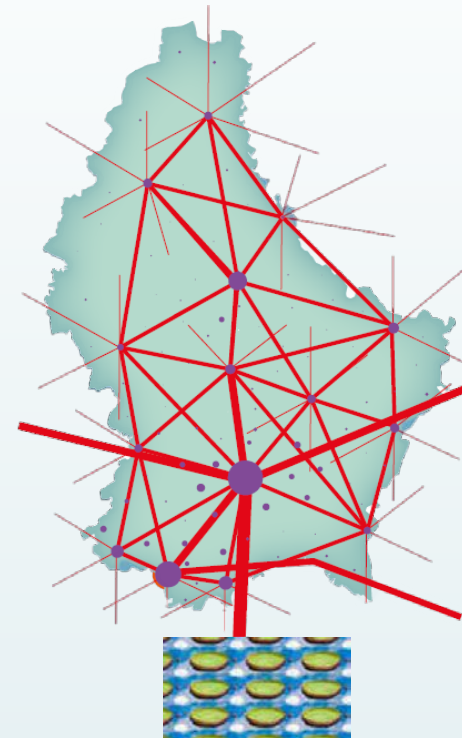
Spatial planning for a sustainable future

In new PDAT, there will be a clear and strong commitment to Scenario 3: organized and harmonic spatial development.

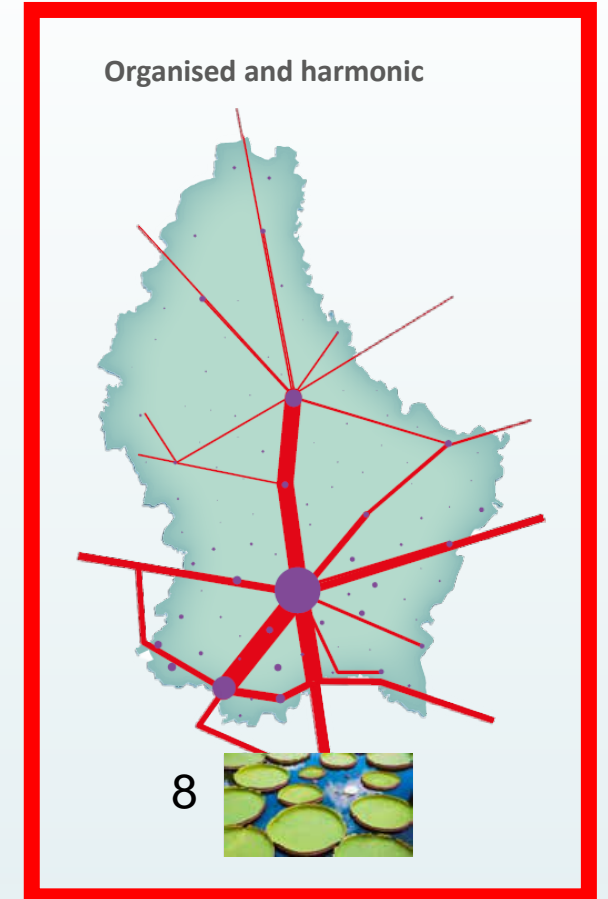
Diffuse and disordered



Directed and theoretical



Organised and harmonic









Scenario 3: Organised & harmonic

Three compact functional urban areas (*Agglo North, Agglo Lux, Agglo South*) in order to ensure:

- A good quality of life for all,
- A sustainable use of land,
- An organized and harmonic spatial development in line with the following principles:

-  Accessibility
-  Centrality
-  Mixed functions
-  Carrying capacity of the land

- A clear positioning of our country for the Third Industrial Revolution and circular economy.

