



RIGOROUS GREENING

A strategic principle for
Amsterdam's urban development
until 2050





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I. Towards a long-term, broad urban planning view

- Amsterdam has many 'nature based solutions' and climate adaptive programs
- The Netherlands is located in a vulnerable spot, and transitioning from controlling nature to living with nature
- Missing is a full integration of nature and climate adaptation in long-term urban planning practices
- Missing is *how to square nature-inclusive cities with rapid densification*



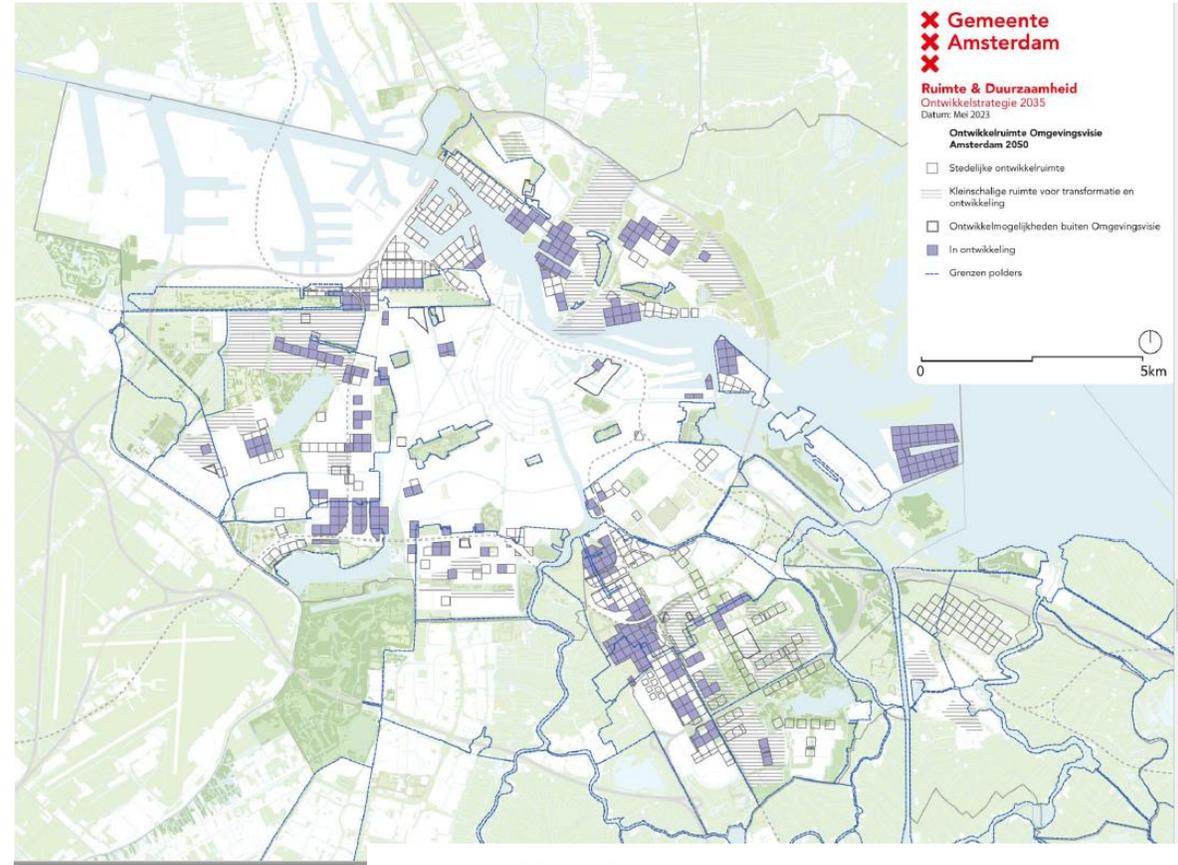
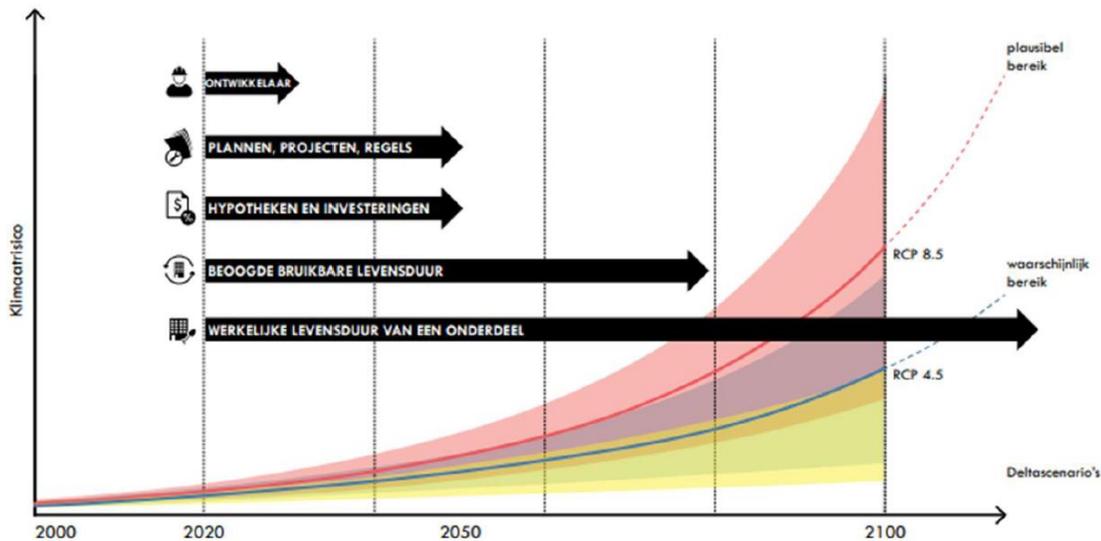
Amsterdam Rainproof



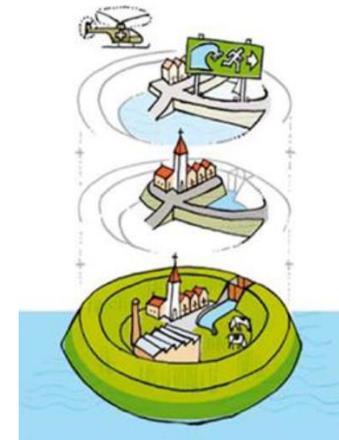


I. Towards...[Con't]

- Amsterdam is currently rapidly growing
- It is also very much exposed to long-term climate change.
- **The Past shows an evolving concept of nature. The present concept in urban planning is unsustainable. Let's examine the past before we get to the future**



Klimaatverandering + verstedelijking
= meer druk op het systeem



Te nat	Te droog en zout	Te kwetsbaar
10x vaker water in woningen en op straat dan afgesproken in NL	Steeds vaker droogte en meer zout bedreigt drinkwater, natuur, agrarisch en scheepvaart	Als 1 asset faalt dan raakt dat 4 miljoen mensen en cruciaal deel van economie



II. A history of Amsterdam's evolving concept of Nature

1200-1500: Nature as Other

- Before Amsterdam existed, a biodiverse **river-delta habitat**, with clay and peat soil, and fresh, salt, and brackish water, governed by the tides.
- Celtic-Germanic polytheistic nature religion.
- The introduction of Christianity changed people's relationship to Nature. **Man at the pinnacle of creation.**
- In early Amsterdam, nature existed for human exploitation. Outside the gardens of monasteries, there was **no green in the city.**
- The city grew as a harbour city, busy with industry and trade.
- **Nature was uninteresting, ineffable, and to be kept out of the city.**



1500-1850 Mastering Nature

- The rise of **European humanism** meant the might of God was challenged by the Rational human.
- Nature became a topic of science and engineering: **objectified, to-be-controlled.**
- Descartes, an Amsterdam resident, sophisticated a dualist worldview: only humans had souls, **nature was mechanical and animals were machines.**
- Amsterdam became **rich**, a powerful 'metropolis' and a colonial harbor.
- The new worldview and riches translated into publically exhibiting exotic plants, animals, and curiosities.
- The Hortus Botanicus was founded in the Enlightenment.
- Merchants designed **luxurious gardens** in their canal houses, and canals were lined with trees, according to classical ideals.



II. A History of... [Cont'd]



1800-1950: A dawning sense of ethics

- Slavery was abolished, and elites developed attention for the (white) working class. An **Ethical consciousness**.
- The social industrial revolution and the **increased environmental footprint** of cities like Amsterdam transformed and threatened the surrounding habitat.
- Civil Society and government initiatives arose to protect green and reintroduce it in the city.
- In the 1920's and **allotment** and **schoolgardens**, and green areas were added between new neighborhoods, aiming to 'raise consciousness' and **provide access within 10 minutes**.



II. A History of... [Cont'd]

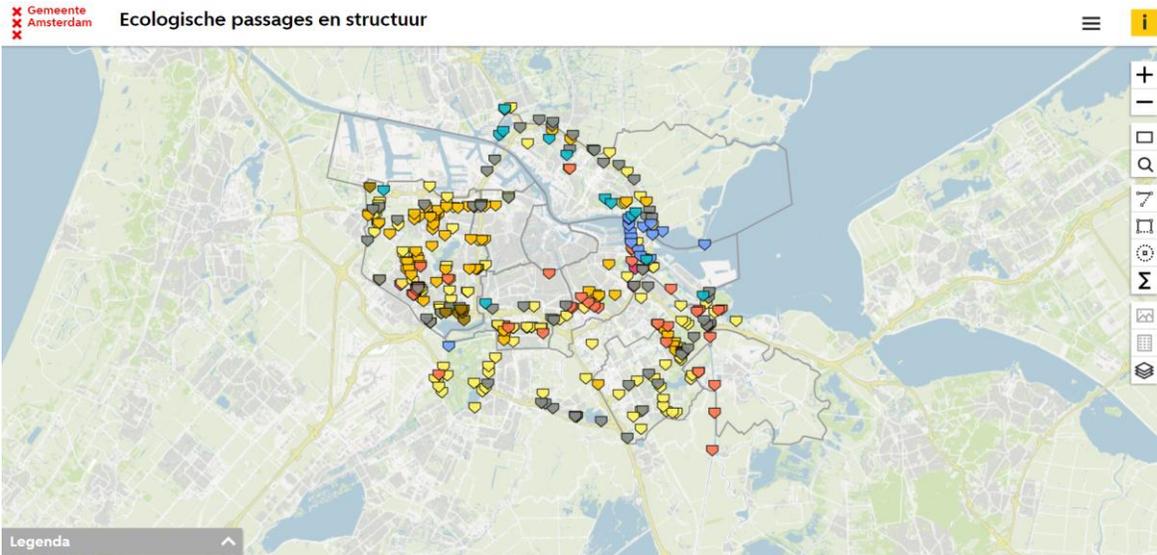
1950-2000: Green accessible for all

- Green now accessible for all in the city.
- 1972: Club of Rome publishes alarming report. **Rise of environmentalism** and awareness of the cost of material progress.
- Increase in knowledge about urban biodiversity. Increase in municipal and civil society organization.
- In the 1970's-1980's, Amsterdam was a relatively **poor** city. **Urban greening suffered as well**, with its effects on biodiversity in the city. Shows interdependence of nature and society in reverse as well.





II. A History...[Cont'd]



2000-today: the relation between humans and non-humans

- Amsterdam experiences an **economic revival**, in part through the rise of the internet – **networks** become a concept in general use.
- In 2011, the ecological structures were settled at city scale in the Urban planning visions. With this, it became possible to think in ecological networks in the city.
- Amsterdam now has more than **10.000 species** of plants and animals, including wild otters and beavers.
- **Nature-inclusive building increased, building on water.**
- The Green Vision develops a view of what green is desirable until 2050.
- The view of the place of humans within nature is no longer self-evident.



III. The Present idea of Nature (and public discontents)

Leading Urban Planning instruments –
Nature-based and Resilient? Are citizen's
ahead of us?

- Groennorm
- Handboek Groen
- Structuurvisie
- Ecologische Hoofdstructuur
- Groenvisie
- Agenda Dieren
- Omgevingsvisie

'Roots Up' – Cities retaking the streets



Public discontent



Els van der Hout:

Volgens het bestemmingsplan
moet 300 meter verderop in de
polder stadslandbouw komen...

Typisch geval cityplanning:
vruchtbare akkers onder zand
zetten en met kunstmest en
pesticiden volgespoten maisland
tot stadslandbouw bestemmen.
Nog los van de idiotie om meer
bedrijventerreinen in dit
historische gebied is dit je
reinste geld en
energieverspilling



IV. Aspired-to Futures

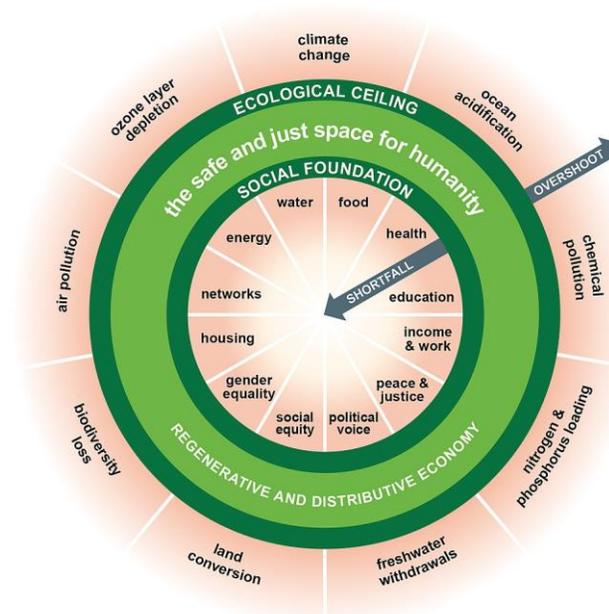
The Omgevingsvisie 2050

- Comprehensive vision for the physical environment of Amsterdam
- ‘Omgevingsvisie A Human metropolis’?
- Five strategic principles
- **But not explicitly nature-based, or climate adaptive**



Transitioning to a nature-inclusive, ecocentric green/blue city

- Sustainability a guiding principle for the government, DONUT-Economy.
- Three transitions:
 - I. Energy transition
 - II. Circular Economy transition
 - III. **Nature-inclusive, ecological transition with climate adaptation, health, and animal welfare**





IV. Aspired-to Futures

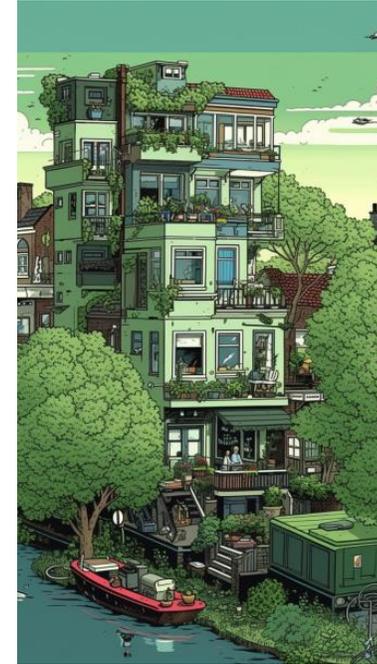
Getting to embody the values we need



Definition of Aspiration:
“*The process by which people transform their values. And with it, themselves.*” – Agnes Callard

What about this strategic principle of rigorous greening?

- Rigorous greening is **not spatially** and **financially articulated** to be of use in long-term, large scale city planning.
- The current urban planning plans **insufficiently** integrate ecology, recreation, animal welfare, and climate change adaptation.
- Apart from climate change, **new pressures** from: densification, new environmental laws (Nitrogen crisis, Water directive), National planning principles (Soil and Water lead), no net loss of urban greenspace.



Present projects:
How to get an urban planner to design the city through soil, green, and water?

- **Planning:**
Rethinking traditional planning themes through the lens of Nature-based, climate adaptive *Rigorous Greening* and *Water en Bodem Sturend*
- **Finance:**
Calculating the avoided costs from rapid action on climate and biodiversity.





V. Questions and Discussion

WHAT IS THE *LIMIT* FOR NATURE-BASED SOLUTIONS
IN IMPROVING CLIMATE RESILIENCE THROUGH URBAN
PLANNING?