

# No Regrets Charter

## Principles for climate change adaptation in cities

Climate change is complex, its exact patterns and impacts are uncertain. 'No regrets' strategies are based on concepts and measures that can begin to be enacted now without being certain about all dimensions of future climate change. Measures are taken and strategies are thus adopted in a precautionary sense with the aim of responding to possible negative impacts before they intensify. Such measures are advisable for future generations, but also relevant to enhancing the living conditions of people in the present. With a 'no regrets' strategy, the benefit of these measures to society therefore continues even in the absence of climate change.

### Preamble

#### The Charter

1. establishes general principles for municipal climate change adaptation through 'no regrets' measures;
2. formulates guidelines in the implementation of adaptation strategies oriented towards the precepts of sustainability, resilience and liveability;
3. provides recommendations for cities' activities in those fields of action which have been addressed through ongoing dialogue;
4. formulates cities' expectations directed towards regional, national and supra-national political and administrative bodies concerning their legislative, financial or informational support to local and regional adaptation strategies.

The Charter is intended to contribute to the global search for guidance on sustainable urban development strategies. It is complementary to the present European Union "Climate Change Adaptation Initiative for Cities"\*. As a working document of the Metropolis network, it is meant to be of decisive impact for long-term climate adaptation strategies that Metropolis member cities and regions are developing.\*

This Charter has been developed through a Metropolis\*\* Initiative on Integrated Urban Governance. It comes out of an extensive period of consultation, including two dialogue conferences in Berlin and Brussels entitled "No Regrets: Pre-Acting and Adapting to Climate Change in Cities".

### Signature Sen

\*[http://www.climatealliance.org/309.html?&tx\\_ttnews%5Btt\\_news%5D=2038&tx\\_ttnews%5BbackPid%5D=308&cHash=4c943abe3d4403851f84828a40292664](http://www.climatealliance.org/309.html?&tx_ttnews%5Btt_news%5D=2038&tx_ttnews%5BbackPid%5D=308&cHash=4c943abe3d4403851f84828a40292664)

\*\*Metropolis is a global network of capital cities and major metropolises. It aims at fostering international cooperation and exchanges between political authorities, public administration bodies and public and private agencies.

## Why we need principles for climate change adaptation in cities

The latest IPCC (Intergovernmental Panel on Climate Change) world climate report emphasises the likelihood of global temperature increases in excess of two degrees. It states that sea levels are rising more rapidly than had previously been predicted. Even if we can stay within the threshold of a two-degree increase, urban environments and living conditions will change considerably.

Cities are simultaneously the origin and also the solution for dealing sustainably with climate change. Cities were and still are the principal originating places for practices that cause carbon emissions. On the other hand, because of their high population numbers, density, and/or geographical location, cities are particularly vulnerable. This quandary has further implications. Cities in the Global North are currently higher *per capita* carbon emitters, while cities in the South will be more severely affected by the impacts of climate change. Cooperation and knowledge exchange is therefore essential.

Large metropolises will be especially affected by climate change. Major cities, in particular, are heat islands. The overall effect of global warming and heat-island effects does not merely form the sum of those parts. As a result of coupling and mutual build-up effects, temperature increases in cities will be higher than the global mean. There will be a significant increase in the frequency and duration of heat waves. Simultaneously, there will be significant changes in precipitation volumes and distribution. In particular torrential rain and storm events will proliferate — albeit with differing regional intensity.

The various dimensions of climate change remain uncertain. It is doubtful whether the aim of limiting temperature increase to no more than two degrees can be adhered to. Mitigation remains essential, but it needs to be supplemented by adaptation. In the best possible case, responsive measures will involve synergy effects between mitigation and adaptation. It is therefore necessary to achieve a balance between effective CO<sub>2</sub> reduction (mitigation) and adaptive social responses to those impacts of climate change which are anticipated (adaptation). This requires that we pursue long-term objectives which require action to be taken here and now in a sustainable way in order to adapt to climate change and make cities more resilient. Such action is best conceived around clear principles and a systematic sense of the comprehensiveness of what is to be done.

### Basic principles

- **Climate adaptation needs to start here and now**  
Adaptation to climate change requires very long-term goals, and its success may only be able to be perceived a generation hence. Adaptation requires time. It needs continually to be enhanced and has to be developed over longer time-spans than electoral periods. This means that we need to begin now to make changes relevant to long-term adaptation. For this, strong political leadership, commitment and accountability are indispensable.
- **Climate adaptation needs a ‘no regrets’ or precautionary approach**  
The discrepancy between the necessity of pursuing long-term objectives and meeting short-term political purposes can be overcome by ‘no regrets’ measures. Having no regrets does not mean business as usual, but rather taking a precautionary principle to future risks. ‘No regrets’ measures are steps which include improving the quality of life today in relation to long-term adaptation to climate change. In this way we can counter uncertainty about how serious climate change will be, and heighten acceptance for the measures that need to be taken. Cost-benefit analysis maybe helpful in this context. As a general rule, costs of measures such as these are considerably lower than the consequential costs of climate change will be.
- **Climate adaptation needs an integrated and participatory approach**  
Climate change will impact on virtually all fields of urban life and environment. Adaptation policies therefore require close co-operation between differing disciplines and planning fields, overcoming the tensions between them. Planning strategies should, as a matter of principle, be constructed in such a way that they take into account possible future effects of climate change and at the very least leave the way open for adaptation measures. These measures must be developed

in an interdisciplinary way and in most cases in close cooperation between a city and its hinterland in order to avoid setbacks and counter-productive results. Climate adaptation requires an inclusive approach. Business and civil society need to be included. This idea does not relieve politics and public administration bodies of responsibility. What is at issue is not the shuffling of responsibility, but on the contrary involving others in responsibility. This partnership approach requires that all the relevant players need to be included. An integrated approach to adaptation needs the following attributes:

- an over-arching strategy and clear objectives;
- intensive communication (inside and outside public authorities);
- political responsibility and leadership; and
- co-operation with higher-level territorial entities (regional and national governments).

- **Climate adaptation needs a holistic sustainability approach**

In adapting actively to climate change, cities should consider action across all domains of social life based on a precautionary or ‘no regrets’ principle based on an ethics of care:

*1. Ecology:* Beyond choosing technical responses that enhance climate change adaptation, cities should seek to generate deeper and more integrated relationships with nature, both inside the city and beyond urban boundaries. This is to move to an understanding of our embeddedness within nature and away from dominion over it.

*2. Politics:* In adapting to climate change, cities should begin now to develop a clear vision and an integrated adaptation plan through a dialogue between expert deliberation and committed civic involvement (that is, deliberative processes). This strategy should be embedded across the board in all policy-making.

*3. Economics:* Urban development should be based on an economy organised around negotiated social needs rather than the conventional production-driven economics.

*4. Culture:* In developing climate adaptation responses, cities should treat the process as one of deep cultural engagement involving broad cultural issues of social learning, symbolism, visualisation, aesthetics, and well-being. This includes recognizing that urban citizens live in natural-cultural regions, not in ‘built islands’.

## **Climate adaptation propositions in detail**

Cities will be affected by climate change to very different extents. Operationalisation of the basic principles listed depends significantly on the concrete situation.

### *Ecological propositions*

- 1.1. With urban settlements organized around locally distributed renewable energy, planned on a district or precinct-wide basis, and with all existing buildings retrofitted for resource-use efficiency and weather responsiveness;
- 1.2. With waterways returned to maximum ecological complexity, linked to the larger ecosystem, and , flanked, where possible, by indigenous natural green-spaces (re-)established along their banks, and with consideration of low-lying areas for water retention or flood control included in spatial planning;
- 1.3. With green parklands and urban woodlands — including areas providing habitats for indigenous animals and birds — increased or consolidated within the urban area, connected by further linear green swathes or ribbons;
- 1.4. With urban settlements organised into regional clusters around natural limits and fixed urban-growth boundaries to contain sprawl and renew an urban-rural divide; and with growth zones of increased urban density within those urban settlements focussed on public transport nodes;
- 1.5. With porous-paved paths for walking, lanes for non-motorised vehicles, and corridors for sustainable public transport given spatial priority over roads for cars; and with these dedicated paths networked throughout the city;

- 1.6. With food production invigorated in the urban precinct, including through dedicated spaces being set aside for commercial and community food gardens; and
- 1.7. With waste management directed fundamentally towards green composting, hard-waste recycling and hard-waste minimizing.

#### *Political propositions*

- 2.1. With adaptation governance conducted through deep deliberative democratic processes that bring together comprehensive community engagement, expert knowledge, and extended public debate about all aspects of adaptation;
- 2.2. With adaptation legislation enacted for socially just land-tenure, including, where necessary, through municipal and national acquisition of ecologically sensitive areas;
- 2.3. With public communication services and media outlets materially supported and subsidised where necessary to generate debates about climate change adaptation;
- 2.4. With political participation in adaptation decisions and processes going deeper than electoral engagement;
- 2.5. With basic ‘human security’ considerations afforded to all inhabitants as the city under-takes its agreed adaptation changes;
- 2.6. With adaptation taking into account the need for on-going reconciliation with the original inhabitants of the landscape, including indigenous peoples; and
- 2.7. With ethical debates concerning how we are to adapt to climate change becoming a mainstream aspect of all levels and disciplines of formal education.

#### *Economic propositions*

- 3.1. With production and exchange shifted from an emphasis on production-for-global-consumption towards generating resilient mixed economies oriented to generating sustainable local livelihoods;
- 3.2. With urban financial governance moved towards budgeting for climate change adaptation, which is built into all relevant aspects of municipal annual infrastructure and services spending;
- 3.3. With regulation negotiated publicly through extensive consultation and deliberative programmes including emphasis on regulation for climate change adaptation;
- 3.4. With consumption substantially reduced and shifted away from goods not produced regionally or not for reproducing basic living — i.e., food, housing, clothing, music and so on;
- 3.5. With workplaces brought back into closer spatial relation to residential areas, while taking into account dangers and noise hazards through sustainable and appropriate building;
- 3.6. With adaptation technologies used primarily as tools for good living, rather than a means of transcending the limits of nature and embodiment; and
- 3.7. With redistributive processes that break radically with current cycles of inter-class and inter-generational inequality built into climate change adaptation implementation.

#### *Cultural propositions*

- 4.1. With climate change adaptation processes recognising and celebrating the complex layers of community-based identity that have made the urban region;
- 4.2. With the development of consolidated cultural activity zones, emphasising active street-frontage and public spaces for face-to-face engagement, festivals and events, including those featuring climate issues;
- 4.3. With museums, cultural centres and other public spaces dedicating some of their ongoing space to comprehensive ecological histories of the particular urban region — public spaces which at the same time actively seek to represent visually alternative trajectories of climate change adaptation from the present into the future;

- 4.4. With locally relevant fundamental beliefs about climate change from across the globe woven into the fabric of the built environment: symbolically, artistically and practically;
- 4.5. With conditions for gender equality pursued in all aspects of climate change adaptation, while negotiating relations of cultural inclusion and exclusion that allow for gendered differences;
- 4.6. With the opportunities for facilitated enquiry and learning available to all, from birth to old age across people's lives; not just through formal education structures, but also through well-supported libraries, community learning spaces and access to interactive websites, including access to climate change adaptation curriculum; and
- 4.7. With public spaces and buildings aesthetically designed and curated to enhance the emotional well-being of people through the process of adapting to climate change, including involving local people in that curatorial task.

### **Cooperation is needed**

Cities are central players in climate adaptation. The opportunities they have to act are however limited. Their activities need to be embedded within a regional and national climate policy framework which in a meaningful way supplements and safeguards municipal efforts. For this reason, support from regional, national and supra-national governments and institutions is required:

- **Legislation**  
The majority of cities do not have any legislative mandate. Regional, national and as applicable supra-national legislators need to establish a legal framework enabling cities to implement their adaptation policies as effectively as possible. Climate change mitigation and adaptation objectives need to be incorporated into relevant legislation and taken into account in new legislation. Regional, national and where applicable supra-national legislatures must not thwart cities' efforts.
- **Research and public information policy**  
There are still gaps in knowledge and prognosis. In many cities models for long-term regional climate development do not exist. Further research is required. Research programmes need to be designed with this in mind and to address climate adaptation as a priority research field. This research needs to be structured in interdisciplinary and practically-oriented ways; dissemination must be included as a central component.
- **Means of support**  
All over the world, several higher-level territorial authorities have elaborated recommendations and information material for municipal climate adaptation. These specific support aids take into account the particular legal and other conditions. They can inspire and assist municipal climate policies and should be elaborated everywhere. Financial, staffing and other resources in many cities are not sufficient for climate adaptation measures. In this context support is required through regional, national and/or supra-national governments for instance by adapting existing funds.
- **Societal discourse**  
Awareness raising and societal discourse are also municipal tasks, but they are not enough. They need to be initiated and continued at other levels as well. For this aim, regional and national governments but also the media are called upon. The topics of climate change and adaptation should for example find their way into school curricula.



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# No Regrets Charter – Annex 1

## Some specific recommendations

The fields of action listed below are by no means exhaustive. However, they are fields which participants in the dialogue meetings felt to be central and were addressed and discussed during the conferences.

### ***Public Dialogue and Participation***

In order to attract and stabilise strong and continuing support, political decision makers and city governments should deliberately invite **all** groups of their citizens and local stakeholders

- to take part in a wide-ranging public discourse about the concept, goals and measures of climate change adaptation and
- to provide their own contributions towards implementing and monitoring the concept.

There are some clear recommendations and advantages in public participation which will make a difference, especially in the long-term:

- *Develop a participation and communication strategy:* through participation processes citizens and stakeholders will gain more well substantiated knowledge of the problems to be solved as well as of the ideas and the interests of other participant groups. This will increase the chances of mutual understanding, can create a distinguished culture of discussion, can reduce the "Not in my backyard"-phenomena and helps to find new kinds of solutions better adapted to differing interests. Identifying "multipliers" and small initial mutual actions (as tree planting for instance) can support this.
- *Include relevant stakeholders and citizens:* through a broad participation process with equal chances for everyone being affected or interested decision makers can be very sure that in this way all the possible solutions have been discussed and weighed up. In order to ensure this, it is necessary to include not only the business sector and representatives of interest groups, who frequently take part in such processes, but also women, young people, migrants or underprivileged groups for instance. Participation helps to reduce the degree of uncertainty, which is one of the main characteristics of climate adaptation strategies, to raise awareness, to sharpen a common view of the problems being related to climate change, and thus supports a sense of a common ownership.
- *Create a sense for active citizenship:* wide-ranging participation during the concept development phase will lay the ground for active citizen and stakeholder engagement during the long-lasting implementation phase of the concept.

During participation processes a number of bottlenecks should be taken into account:

- *Overcoming 'closed shop' tendencies:* there are tendencies for people who have a higher standard of education and for stakeholders to rely upon a professional basis of public presentation. This frequently will result in an over-representation of some groups within public participation processes. In this context different role model, gender, social status and age related cultures and styles of discussions and public arguing must be taken into account. Municipal governments should continually check whether all groups of citizens (such as, for instance, less well educated people, ethnic minorities, young people, women and small firms, traditional craftspeople serving niches in local markets, etc.) are sufficiently represented. If this is not so, cities should try to develop and to apply forms and channels of participation that are especially designed to reach under-represented

groups, such as, for instance, forms of visualisation, urban quarter or neighbourhood management concepts, outreach work, etc.

- *Avoiding frustration:* immediately at the beginning of participation processes, there must be clear understanding of what elements can be affected and what will be beyond influence by the participants. This kind of 'framing' is important to acquire a realistic estimate of the opportunities of and limits to the participation process.
- *Reducing drop-out rates:* during a long lasting participation process many participants will withdraw from participation, because they expect quick results or success. To reduce this during the phase of concept development, participation processes should be split up into different steps and phases; there should then be specific points within the process at which interim results are reported and discussed. For the implementation phase, several kinds of formal commitment arrangements between city government, stakeholders and citizen groups seem to be promising concepts.
- *Public monitoring:* specific indicators and a reporting system should be developed in order to monitor the adaptation concept and to keep up communication with inhabitants. Monitoring should aim at 'small sets of simple indicators' rather than complex 'scientific data sets'.

### ***Disaster risk reduction***

- Climate change adaptation and disaster prevention are closely linked and need both common solutions and local approaches.
- The objective is to reduce risks and impacts of disasters – be it by storms, floods or heat. For this purpose – in addition to concrete measures which have been outlined in other sections of this Charter – cooperation between municipal authorities, local communities, civil society and disaster management institutions needs to be intensified. This also includes improving internal coordination and incorporates in addition cooperation with regional and national disaster management institutions more effectively.
- Maintaining up-to date data on hazards and vulnerabilities, preparing risk assessments and using these as the basis for urban development plans and decisions is essential. Ensuring that this information and the plans for cities' resilience are readily available to the public and fully discussed with them. In this way it is possible to consider systematically scenarios and the possible impacts of these in conjunction with those organisations/institutions and infrastructure agencies affected in the specific instances. In assessing risk it is important to bear in mind that sections of the population outside immediate risk areas may also be affected for example, due to power failures, reduced water supplies or food shortage.
- City planning and policy should ensure the resilience of key infrastructures and take into account interdependencies and domino effects. Effective (technical) early warning systems save lives. Preparedness should be enhanced to enable the population to react appropriately and to be able to exploit to the full potential for self-help including their neighbours. Warning systems should not only be able to reach all those involved, but in addition should also be comprehended by everyone and be translated into appropriate actions.

### ***Flood management***

- As is the case with most adaptation measures, river flood-prevention measures have a spatial character. Especially in cities measures such as dikes have consequences for spatial development. Measures such as those in the Netherlands "Room for the river" project are also an example of this. Intensive collaboration between urban spatial

development experts and water-management experts in planning for climate adaptation is therefore crucial.

- Introduction of 'adaptive building' in outer dike areas means that other types of construction and design of public space is introduced. Flood-proof design of public space needs another mind-set and new knowledge for designers. Building elevated transformer stations for power supply is an example. But also flood-proof design of houses in those areas needs special attention and clear agreements with building companies. Awareness raising is important.
- Prevention of flooding due to intensive rainfall is a challenge in densely populated areas. The capacity of sewers and canals is often limited. Expanding solutions by using the entire 'city space' is a successful approach in Rotterdam. Creating water storage in above-ground public space adds solutions to the problem of excessive rainfall and adds quality to public space, such as water squares, but also green roofs on top of buildings. It enlarges the 'sponge' function of the city. This also means that water managers, public-space designers and real-estate owners have to co-operate intensively. This can be a challenge in a city with many stakeholders, but creates also opportunities for new cooperation.

### ***Water supply and disposal***

- *Knowing your problem areas:* Simple tools (GIS surface models) can be used to research which areas are vulnerable if they are hit by intensive rainfall. We tend to lose ourselves in complex models, whereas most of the information is already on the table. Residents of an area know in most cases exactly where the wet spots are. This information is usually already available at municipalities and water authorities or if not, is simple to harvest by means of social media.
- *International knowledge exchange:* When looking for smart cost effective solutions it is quite effective to look across borders. Best management practises (BMPs) and Sustainable Urban Drainage Systems (SUDS) are widely found on seminars, papers and internet. EU projects have extensive websites with solutions. Most effective solutions are the ones that focus not only on water, but firstly give an answer to the real problems in that area and are multifunctional. When more functions can be added to the system it is more likely that all involved will accept it and you will get the budget to implement it (most problems in implementation are: lack of budget and acceptance).
- *Communication:* In most cases we do not lack technical solutions but the ability to 'sell' them. Sometimes visualisations and interactive communication tools can be used to get the right people at the table and explain the need for sustainable drainage systems. Experiences with serious gaming and augmented reality are positive (examples at [www.skintwater.eu](http://www.skintwater.eu)).

### ***Spatial planning and green areas***

- Planning instruments and approaches need to take into account all possible dimensions of planning, horizontally and vertically. Human health (and possible new diseases through higher temperature) needs to be incorporated as a fundamental value in all planning processes.
- Cities with high population density have the benefit of short distances. But high density makes cities also more vulnerable, which increases the importance of climate adaptation measures. Both must be thought together. Our approach to spatial planning should be to create multidimensional spaces in cities, which function interdependently and take into account a multiplicity of uses and needs. In this way mobility needs (through motorized transport) may be reduced, too.



- Five key spatial planning strategies can be identified to support urban climate adaptation by:
  - making cities greener
  - cooling cities by evapotranspiration and fresh air supply corridors (for instance by trees, green lungs etc.)
  - planning for shade from vegetation, particularly in streets
  - limiting soil sealing
  - measures to increase well-being in public spaces despite of the urban heat effect
- Planning should not only focus on organising change and adaptation, but should also establish for some areas a category of “no planning” to keep these areas green and unsealed.
- Integrating these various approaches (‘multiple coding’) allows for the development of multi-functional spaces suitable for living, housing, mobility, climate adaptation and relaxation in our cities.

### ***Buildings and energetic rehabilitation***

- Adapting buildings to climate change means, on the one hand, measures to improve the building stock and, on the other, development of climate-friendly standards for new buildings. The technical solutions for adapting buildings to climate change are in some cases basically known and tested. Most of the measures to make buildings more energy-efficient serve the purpose of both mitigation and adaptation. Apart from the refurbishment of buildings to improve their energy record, the albedo effect of facades and shading will increasingly have to be considered. Additionally, buildings should be redesigned so as to be able to resist other effects of climate change as well, such as more frequent heavy rainfall or storms.
- With shade, fresh air corridors, etc., the residential environment is to be structured in such a way as to improve the outdoor quality of life, even when temperatures rise. For that purpose, existing fresh air corridors and their connections to inner-city green areas and forests must be maintained and/or further expanded.
- Especially when it comes to adapting buildings to climate change, a multitude of stakeholders with in part very different short-term interests are to be involved in the adaptation strategy. Potential conflicts of interest include, for example, varying exploitation plans of private land owners or differing views on spatial development. The spatial development vision of a compact city, for example, has to be reconciled with the vision of a climate-friendly city which is aiming to avoid an overly dense structure. All of this means that climate adaptation of buildings is first and foremost a management task requiring leadership and enabling discourse and the identification of common goals.

# No Regrets Charter – Annex 2

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