

Good Practice in Policy Integration of Nature-Based Solutions:

Paris bio-climatic urban planning or “Plan Local d’Urbanisme (PLU) Bio-climatique”

Short description

What The Paris Local Urban Plan (PLU) is a comprehensive regulatory framework that replaced the 2006 version following a 2024 revision. Urban planning rules define a ‘city project’ and regulate all construction, renovation or demolition and are revised every 15 years.

The main objective of the revision was to increase the city’s climate preparedness. The Parisian PLU integrates bioclimatic design principles—conceiving city planning as a tool for the ecological transition and climate adaptation—to adapt existing structures and guide new developments. With this new PLU, the City is proposing a vision for urban development that aims to improve quality of life while respecting the environment, biodiversity, and the biosphere.

The plan is composed of five key elements:

1. The introductory report (*Rapport de présentation*) [1] which includes information and data on the city today (sociodemographic and environmental data, etc.), an evaluation of the project, and a justification of the choices made.
2. The Sustainable Land Use and Development Plan (*Projet d’aménagement et de développement durable*, PADD)[2], which constitutes the policy framework setting out the guidelines for the PLU.
3. Thematic and sector-specific Land Use and Planning Guidelines (*Orientations d’aménagement et de programmation*) [3](OAP) which define specific objectives for certain urban planning themes or specific sectors of the Paris metropolitan area.
4. *Regulation (Règlement)* [4] that is, the written and graphic rules set forth in plans that establish, in particular, the rules governing land use and building purposes, as well as the urban, architectural, environmental, and landscape qualities of buildings, and the facilities, networks, and reserved sites. While the regulatory text primarily uses operational and prescriptive terminology such as “nature in the city” (*nature en ville*), “vegetalisation”, “desealing”, and “green infrastructure”, the term NbS is explicitly present in the strategic and explanatory documents accompanying the PLU. The PADD explicitly frames the city’s adaptation strategy around NbS, identifying them as the core method for achieving climate resilience and biodiversity goals.
5. The annexes to the PLU, which set forth, in particular, all public easements affecting land use. With this new PLU, the City proposes a vision for urban development that aims to improve quality of life while respecting the environment, biodiversity, and the biosphere. With this new PLU, the City proposes a vision for urban development that aims to improve quality of life while respecting the environment, biodiversity, and the biosphere.

Who The framework is defined by the City of Paris political leadership through the PADD, while its technical implementation and enforcement are managed by the urban planning services of the municipality, ensuring alignment with national and European regulations.

Why The revision aims to strengthen social inclusivity, protect cultural diversity, and embed climate and biodiversity resilience into all urban decisions. It shifts from a static zoning approach to a dynamic method where every project contributes to the ecological transition, transforming the city to meet contemporary environmental challenges. The bioclimatic local urban development plan aims to make Paris a carbon-neutral city by 2050 by promoting low-carbon building practices; as such, rehabilitation and renovation are systematically prioritised over demolition.

Where The PLU applies to the entire geographical territory of Paris, covering all private land within the city limits, with the exception of the two notable heritage sites governed by their own preservation plans [5bis]. It regulates land use, construction rights, and architectural constraints across all 20 arrondissements.

Key messages

The revised Paris PLU establishes a transformative framework designed to make the capital resilient, inclusive, and carbon-neutral by 2050. At its core, the plan shifts urban development from a model of expansion to one of regeneration, prioritising the enhancement of existing spaces over new construction. The overarching ambition is to create a city where nature is not an ornament but a fundamental infrastructure for climate adaptation and social well-being.

Strategic Objectives include:

- **Expanding Green Access:** ensuring 10 m² of green urban space per inhabitant by 2040. The city aims to achieve this by adding 55 hectares of new green space within existing parks and creating over 300 hectares of new urban green spaces across the city, ensuring equitable access for all residents.
- **Restoring Soil Health:** A critical target is to unseal 40% of the PLU territory by 2050 (3890ha).
- **Mandating Nature in Construction:** New development must contribute to this green network. Any construction project on plots larger than 150 m² is now required to dedicate up to 60% of the plot area to open ground and green spaces, ensuring that density does not come at the expense of nature.
- **Protecting Existing Heritage:** The plan strengthens tree protection measures, recognising mature trees as vital assets for carbon sequestration, shade, and biodiversity that cannot be quickly replaced. Tree removal is regulated and must be justified. Strict replanting rules apply, with compensation based on the trees' growth at maturity. The PLU establishes protections for street trees and notable trees.

Description of policy

The PADD, which embodies the political vision of the PLU, is built upon three fundamental pillars: enhancing the city's climate resilience, fostering social inclusion and solidarity, and preserving cultural identities.

Achieving climate adaptation and environmental objectives relies heavily on Nature-based Solutions (NbS).

Accordingly, the plan establishes ambitious guidelines to reintegrate and promote nature within the city:

1. Enhance existing biodiversity reservoirs, green and blue infrastructure, develop vegetation wherever possible (even in small spaces). This involves the strengthening of green spaces protection, with particular attention to the green and blue belt (in the green and recreational belt and areas with a shortage of trees and green spaces). The plan involves the protection of notable trees and street trees and the mandatory replacement of felled trees (double replacement with areas in a green spaces deficit, in the green belt and sports zones), as well as the protection of community gardens. The PLU aims at supporting the expansion of green spaces by establishing a planting density rule requiring a minimum number of plants per plot for all projects, increasing the minimum thickness of green roofs (at least 25 cm for new construction and at least 15 cm for major renovations and roof extensions).
2. Develop biodiversity in parks, develop major natural spaces. Avoid reducing and compensating: proceed with renaturation when impacts are unavoidable.
3. Enhance urban soil. Develop open ground spaces and explore their link with existing ecological continuity. De-artificialization: achieve 40% of non-impermeable surfaces by 2050 (ie. 3,890 ha), supported by the Rainwater Plan. Recreate fertile soil from excavated land.
4. Develop parks and gardens, increase the presence of trees (the PLU supports the tree plan, which provides for the planting of 170,000 trees by 2026). As of June 2026, 155 000 trees have been planted [7bis]. The PLU aims at increasing the network of green spaces to reach 10m² per inhabitant in 2040.
5. Water preservation, wetland restoration, "giving water a more important place in the city of tomorrow" including with the de-impermeabilization and renaturation of the banks of the Seine.
6. Combating urban sprawl with net zero consumption of natural, agricultural, and forest areas.

Images



Green spaces mapping in Paris Source: Paris city council [X] presentation report

Scale and Location		Type of Policy Instrument	
Local level for Paris		- Regulatory instrument with binding features - Planning instrument	
Network Nature Themes			
- Sustainable urban and regional transformation - Climate Mitigation, Adaptation and Resilience - Biodiversity and Ecosystems			
Policy Good Practice Criteria			
NbS mainstreamed in policy text and/or NbS are a central component of policy response		There is a dedicated thematic document outlining the development guidelines focusing on biodiversity and adaptation to climate change. In the specific guidelines for certain sectors, there is a section focussing on the green network which outlines the preservation and restoration of major tree corridors among other measures which fall under the NbS category. At the time the PLU was developed, the concept of NbS was not yet as widely known or commonly used as it is today. For this reason, the term was not explicitly included in the document [7bis]. Despite no direct mention of NbS in the OAP Thematic document for biodiversity and adaptation to climate change, NbS are implicitly supported by the biodiversity conservation and climate change adaptation objectives of the plan. NbS are a central component as the design of open spaces and ‘green spaces’ must aim to link ecological and climate issues with the quality of daily use within a coherent overall landscape project.	
Societal challenges are addressed and human wellbeing outcomes are identified		In the context of societal challenges, such as extreme heat or urban heat island affect among others, there is a section on public spaces particularly vulnerable to episodes of high heat. In 2050, climate projections show that Paris would have similar temperatures as Seville, Spain. The thematic OAP “public spaces” provides directions towards creation of most continuous shaded routes possible and occasionally provide shaded rest area by creating seating and access to water alongside removing soil sealing – which ultimately benefits human wellbeing outcomes. The OAP public space also focusses on providing guidance for cooling the environment with nature. Additionally, there is a specific	

	section that focuses on making public spaces accessible to all, by enhancing services and amenities provided by public spaces such as more play already, recreational and sports as well as rest areas. The PLU promotes water resilience through climate- and landscape-based approaches: reducing soil sealing, enhancing water retention in the soil, preserving wetlands. Biodiversity and adaptation to climate change: One of the 7 OAP is specifically dedicated to biodiversity focused on adapting new infrastructure to existing biodiversity and favouring ecological continuity, paying particular attention to the green network, urban biodiversity reservoirs, biodiversity corridors (fauna movement), minimising sealed surfaces as much as possible. An evaluation tool called 'BiodivScore' can help evaluate the biodiversity value of a site, limit negative impacts of a project and plan compensatory measures if needed. On this point, the OAP provides recommendations on the type of compensatory measures that should be associated with certain types of projects.
Dedicated budget and/or funding stream	Technical and financial support.
Indicators of impact and evaluation framework	The objectives set in Paris new urban planning rules are supported by a set of tracking indicators, publicly available in an Indicators handbook [5]. Under each thematic objective, a range of indicators are identified, including indicators indirectly tracking the implementation of NbS. For instance, the total area of desealed surface or the volumes of rainwater retained provide clear indications of progress in implementing NbS. Regarding biodiversity, the handbook outlines indicators relevant to the presence of certain species, the number of trees of certain species/diameter, the number of trees planted (also according to their size), vegetated surfaces, green roof areas, number of urban planning permits with an environmental label ("BiodiverCity" Construction, Effinature) or the BiodivScore methodology. National law requires urban planning rules to be accompanied by a study on potential environmental impacts [6] of the rules and a baseline assessment of the state of environment. The impact study describes and assesses the significant effects that the individual measures may have on the environment, presents the measures envisaged to prevent, reduce and, where possible, offset these negative effects, and explains the reasons why the project was chosen from among the development options considered. Overall, the impact study concludes that the bioclimatic PLU should have a positive impact on the environment, compared to business as usual. The evaluation of these impacts utilises a scoring heatmap that ranges from negative to positive effects to visualize outcomes. Key results include the mastery of urban sprawl, where practically no construction is authorized in natural zones, and a strong focus on the de-impermeabilization of the territory to improve water management.
Inclusivity and stakeholder engagement	The revision of urban planning rules in Paris involved several stakeholder consultations, at different stages of the process, with a dedicated platform hosting consultation [7][8]. A citizen consultation started in 2020 with a panel of 100 citizens on the objectives of the PLU. A first general consultation on the initial territorial diagnosis [9] took place in 2021. This consultation, gathering almost 3,000 contributions, revealed that the topic of "environment, nature, and health", was the primary concern of participants. In 2022, a second consultation phase took place with inhabitants on the PADD, the document highlighting the main orientations of the new urban planning rules. More than 15 600 contributions have been submitted. End 2022, a third consultation asked citizens their opinion on the sectoral objectives, the OAPs. In 2023, the City Council consulted relevant public entities and similar bodies, as well as the environmental authority. Beginning of 2024, the Council organised a public hearing—approximately 14,000 comments were submitted. On November 20, 2024, the Paris City Council approved the bioclimatic local urban development plan (PLU).

	In addition to public consultations, the city administration organised a total of 51 public meetings, nearly 140 workshops and exploratory walks, and received more than 600 stakeholder reports from 161 contributors: professionals, associations, neighbourhood councils, and individuals. Throughout the entire process, the consultation involved nearly 8,000 participants and generated 53,138 contributions [10]. To ensure the successful implementation of the PLU's bioclimatic objectives, the City of Paris has deployed support tools designed to guide, fund, and accelerate the transition for key stakeholders, including co-ownership associations (<i>copropriétés</i>). These initiatives bridge the gap between regulatory requirements and on-the-ground action by providing tailored technical expertise and significant financial incentives. The Paris Climate Agency is a key support to accelerating the transition, it provides stakeholders with the necessary resources to navigate complex regulatory landscapes, secure financing, and implement high-quality environmental projects [11]. For example, the Agency operates CoprOasis, a dedicated program assisting co-owners in transforming their outdoor spaces into green oases [12]. This initiative offers a complete package of technical and financial support to projects focused on vegetating courtyards and roofs, desealing soils to enhance permeability, and recovering rainwater.
Consistency within policy mix	High consistency with local and national policy mix. The PLU is a translation of orientations set out locally in: • Plan Climat Air Energie Territorial de la Ville de Paris 2024-2030 [13]: The Climate Plan sets Paris's long-term climate goals: carbon neutrality, energy reduction, adaptation to heatwaves, and improved air quality. It drives actions on buildings, mobility, and urban cooling. The PLU translates climate targets into land-use rules (de-impermeabilization, vegetation, building performance, urban cooling requirements). • Plan Biodiversité 2025-2030 [14]: This strategy aims to strengthen ecological continuity, increase habitats for fauna and flora, and integrate biodiversity into dense urban fabric. It promotes vegetated surfaces (eg with hedgerow planting programme, more green spaces in schools, the objective of 500 new green and pedestrian streets, etc), ecological corridors, and nature-based design (including green roofs). The bioclimatic PLU operationalizes these goals through rules on planted areas, green roofs, soil permeability, and protection of existing ecological spaces, increasing ecological connectivity, operationalising the "avoid, reduce, compensate" sequence (ERC). • la Stratégie Résilience [15]: The resilience strategy prepares Paris for shocks such as heatwaves, flooding, or social and infrastructure disruptions. It supports the mapping and public awareness of risks, the development of solidarity networks, urban transformation for risk management (eg green roofs to mitigate urban heat island effect). The PLU supports the transformation of the building infrastructure towards more resilience (de-sealing, urban greening, etc). • Plan Arbres [16]: The Tree Plan aims to increase canopy cover and plant large numbers of trees across streets, squares, and public spaces to improve shade and reduce urban heat. The city aimed at planting 170 000 trees between 2020 and 2026. As of February 2026, 129 542 trees have been planted. The PLU protects existing trees and requires more space for planting, influencing setbacks, soil permeability, and landscape design in new developments. • Plan Alimentation Durable [17]: The sustainable food plan focuses on sustainable and local food systems, especially municipal collective catering (schools, care facilities), with goals like 100% organic and sustainable municipal catering (75% of food products are certified organic, 100% are seasonal, and 50% are produced less than 250km from Paris.) The PLU supports urban agriculture, logistics spaces, and productive landscapes that enable local food resilience. • Plan Pluie [18]: The Rain Plan promotes and maps a "sponge city" model: managing stormwater at source and reducing impermeable surfaces. It aims to increase de-sealed surfaces and disconnect a portion of rainwater from

	sewers. These dispositions are integrated into the stormwater zoning regulations, that are annexes of the PLUb. Regional level - At regional level, the Territorial Coherence Scheme (SCoT) is a prescriptive strategic document at metropolitan scale, and local urban plans must be compatible with it. The Greater Paris Metropolis SCoT [19] follows the national objective of zero net land artificialisation, the first 10 years land consumption must be divided by two compared with the previous decade and then the trajectory must be aligned toward zero net artificialisation. PCAEM (Plan Climat Air Énergie Métropolitain) [20]: The PLUb's focus on descaling soils, managing rainwater, and creating urban heat islands mirrors the PCAEM's priority actions for territorial resilience against heatwaves and flooding. National level Loi Climat & Résilience du 22 août 2021 [21]: By prioritising the redevelopment of existing urban fabric and strictly limiting construction in natural zones, the plan directly contributes to the national mandate of achieving Net Zero Artificialization (ZAN) (Net zero landtake) by 2050. - The Paris PLUb actively advances national biodiversity objectives, specifically aligning with the National Biodiversity Strategy 2030
Knowledge development and transmission	The revision of the urban planning rules involved active communication and awareness raising activities, in parallel to the public consultations. Several information campaigns took place throughout the whole revision process, To foster knowledge development and transmission, the revision process was underpinned by robust research and public engagement initiatives led by key local institutions. All relevant documents are publicly available, in accessible formats [23][24], complemented by explanatory videos. The Pavillon de l'Arsenal [25], Paris's center for architecture and urban planning, played a pivotal role by producing in-depth research and exhibitions on the bioclimatic transition, making these critical resources accessible online to inform both professionals and the general public. Complementing this, the "Paris à 50°C" [26] initiative served as a powerful awareness-raising tool, utilising immersive simulations and educational campaigns to visualise the tangible impacts of climate change on the city, thereby galvanising public support for the ambitious adaptation measures embedded in the new PLUb.
Success Factors/Uptake/Impact	
- The political support is a main factor behind the successful roll out of the PLUb. - Cross departmental collaboration in the design and implementation of the PLUb is another important element which supports the aims of the PLUb. - Stakeholder engagement via consultation processes carried out diligently for the PLUb adoption.	
Barriers and Challenges	
- Developers might face constraints, longer permit timelines, and stricter design requirements to match the directions from PLUb. - Important to reach a balance between environmental objectives, social equity and housing demands.	
Potential for Replication / Upscaling	
Potential to replicate the PLUb or parts of it is high as it aims to support cities in meeting their needs for more urban green spaces as well as ensuring potential of retrofitting solutions in already dense cities.	
More Information & Sources	
[1] City of Paris. <i>Presentation Report PLUb</i> https://regles-urbanisme.paris.fr/plu-bioclimatique/jsp/site/Portal.jsp?document_id=201&portlet_id=45	

- [2] City of Paris. *Sustainable Planning and Development Project (PADD)*.
https://regles-urbanisme.paris.fr/plu-bioclimatique/jsp/site/Portal.jsp?document_id=251&portlet_id=45
- [3] City of Paris. *Planning and Programming Guidelines (OAP)*.
https://regles-urbanisme.paris.fr/plu-bioclimatique/jsp/site/Portal.jsp?document_id=226&portlet_id=45
- [4] City of Paris. *Regulations (including easements)*.
https://regles-urbanisme.paris.fr/plu-bioclimatique/jsp/site/Portal.jsp?document_id=198&portlet_id=45#consultation_html
- [5bis] City of Paris, Notable Heritage Sites and Their Preservation and Enhancement Plans (PSMV)
<https://www.paris.fr/pages/secteurs-sauvegards-psmv-2351>
- [5] City of Paris. *Indicators Handbook*.
https://regles-urbanisme.paris.fr/plu-bioclimatique/jsp/site/Portal.jsp?document_id=201&portlet_id=45
- [6] City of Paris. *Environmental Assessment*.
https://regles-urbanisme.paris.fr/plu-bioclimatique/jsp/site/Portal.jsp?document_id=201&portlet_id=45
- [7 bis] Interview
- [7] City of Paris. *Public Consultation Platform*.
<https://idee.paris.fr/>
- [8] City of Paris. *Revision of the Local Urban Plan: What Will Paris Look Like in 2030?*
<https://www.paris.fr/pages/la-revision-du-plan-local-d-urbanisme-plu-17018>
- [9] APUR (Atelier Parisien d'Urbanisme). *Territorial Diagnosis*.
<https://www.apur.org/dataviz/plu-diagnostic-territorial/>
- [10] City of Paris. *Consultation Report. Draft Deliberation – Statement of Reasons (2023)*.
https://a06-v7.apps.paris.fr/a06/jsp/site/plugins/odjcp/DoDownload.jsp?id_entite=59035&id_type_entite=6
- [11] Agence Parisienne du Climat. *Paris Climate Agency – Accelerator of Local Ecological Transition*.
<https://www.apc-paris.com/>
- [12] City of Paris. *CoprOasis – Helping Co-ownership Buildings Go Green*.
- [13] City of Paris. *Paris Climate, Air and Energy Plan 2024–2030*.
<https://www.paris.fr/pages/paris-pour-le-climat-2148>
- [14] City of Paris. *Biodiversity Plan*.
<https://www.paris.fr/pages/un-nouveau-plan-biodiversite-pour-paris-5594>
- [15] City of Paris. *Paris Resilience Strategy: Facing the Challenges of Tomorrow*.
<https://www.paris.fr/pages/la-resilience-parisienne-une-strategie-pour-faire-face-aux-defis-de-demain-29246>
- [16] City of Paris. *Trees in Paris*.
<https://www.paris.fr/pages/l-arbre-a-paris-199>
- [17] City of Paris. *A Sustainable Food Plan for Paris*.
<https://www.paris.fr/pages/un-plan-alimentation-durable-pour-paris-2705>
- [18] City of Paris. *The Paris Rain Plan (ParisPluie)*.
<https://www.paris.fr/pages/le-plan-parispluie-5618>
- [19] Métropole du Grand Paris. *Metropolitan Territorial Coherence Scheme (SCoT)*.
<https://www.metropolegrandparis.fr/fr/schema-metropolitain-de-coherence-territoriale-scot>
- [20] Métropole du Grand Paris. *Metropolitan Climate, Air and Energy Plan (PCAEM)*.
<https://www.metropolegrandparis.fr/fr/plan-climat-air-energie-metropolitain>
- [21] French Government. *Climate and Resilience Law of 22 August 2021*.
<https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000043956924>
- [22] French Government. *National Biodiversity Strategy 2030*.
<https://biodiversite.gouv.fr/la-strategie-nationale-biodiversite-2030>
- [23] City of Paris. *Revision of the Local Urban Plan (PLU)*.
<https://www.paris.fr/pages/la-revision-du-plan-local-d-urbanisme-plu-17018>
- [24] City of Paris. *Bioclimatic Local Urban Plan (PLU)*.
<https://regles-urbanisme.paris.fr/plu-bioclimatique/>
- [25] Pavillon de l'Arsenal. *Exhibitions*.
<https://www.pavillon-arsenal.com/fr/expositions>
- [26] City of Paris. *“Paris at 50°C”: A Full-Scale Exercise to Prepare for Extreme Heat*.
<https://www.paris.fr/pages/paris-50-c-un-exercice-grandeur-nature-pour-se-preparer-aux-chaleurs-extremes-24322>

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