

Ecological Transition Policy

Summary



VILLE DE TERREBONNE



Document produced by Ville de Terrebonne's Bureau de l'environnement et de la transition écologique

In collaboration with:





Our Terrebonnien vision for mobilizing ecological transition

Aware of the ever-increasing human pressures and the limits of the planet's ecosystems, Terrebonne is mobilizing the stakeholders on its territory for a meaningful ecological transition.

By adopting exemplary practices and by supporting residents' initiatives and the businesses taking actions in favour of this transition, Terrebonne is consolidating its own actions to promote a just and eco-responsible world.

1

The ecological transition or the unavoidable duty to take action

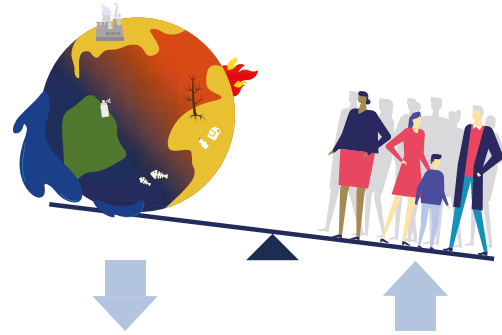
The ecological transition is a response to the scientific observation that human activities are degrading the environment to such an extent that their consequences are becoming harmful not only to the planet, but also to the health of humans themselves.

To date, scientists report that a number of planetary boundaries have been crossed, but this situation can be improved if we act collectively and individually... now. It is therefore urgent to take action!

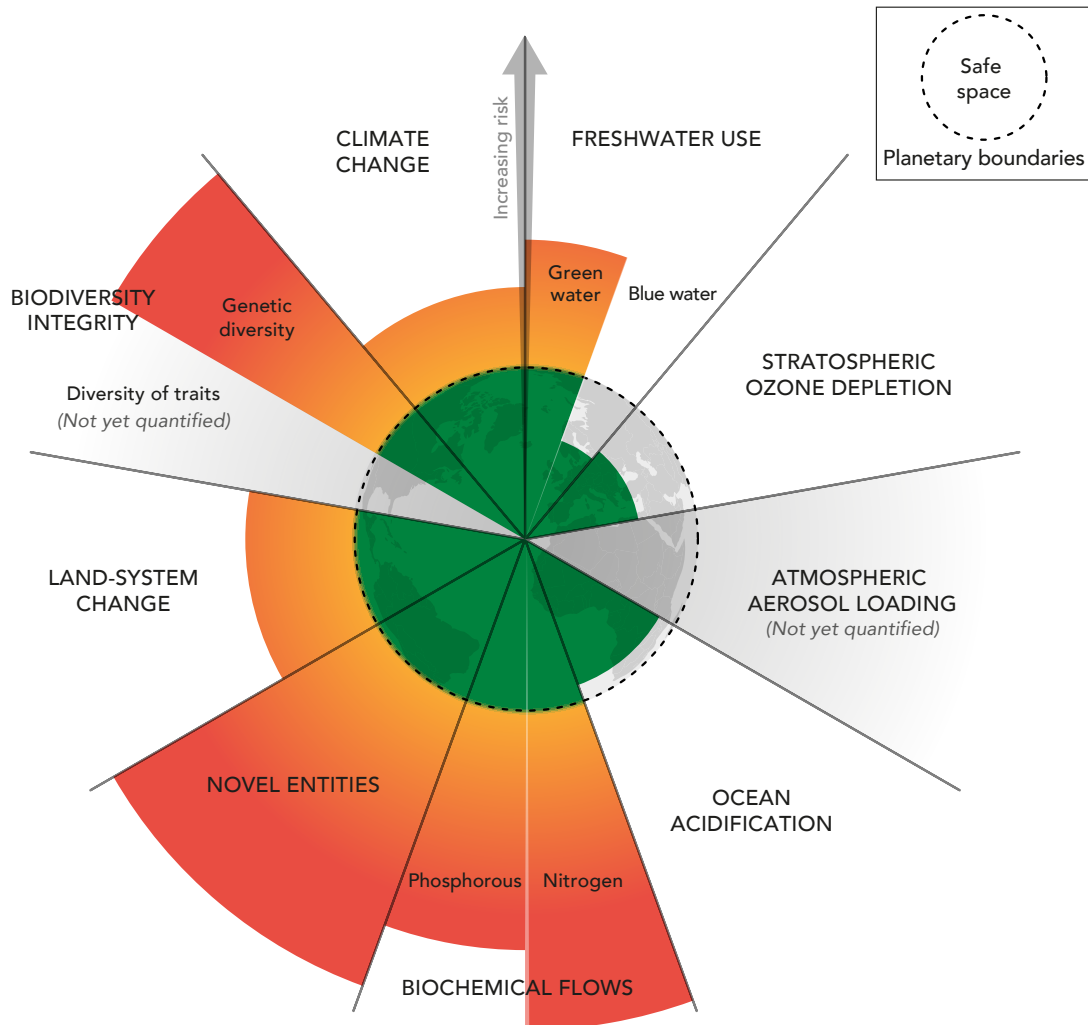
The ecological transition is above all the search for and implementation of concrete solutions to find a more coherent balance between our lifestyles and the planetary boundaries.

This analytical framework, proposed in 2009 by researchers at the Stockholm Resilience Center, is both simple and useful. It clearly illustrates the idea that the planet can be resilient in the face of a certain level of disturbance, but also that it can be degraded in a potentially irreversible way if a certain biophysical limit or boundary is crossed. Such a limit or boundary is called the planetary boundary.

For each issue, the level of severity of the situation is represented on the diagram by the extension of the sliding scale (green or red), from the centre to the outside. The planetary boundaries are represented by the outer edge of the circle (symbolizing the Earth), which corresponds to the "safe space".



Planetary boundaries



Source: Adaptation of a diagram produced by the Stockholm Resilience Center (www.stockholmresilience.org)

Turning to solutions

An ecological transition policy must address the problem of environmental degradation with a holistic view, including seeking solutions for a number of issues at once and avoiding as much as possible any actions that might help one issue but harm another.

Our Policy is instead intended to be a general guide for the implementation of concrete actions in current and future plans. It aims to influence the way we do things and the way we think. The idea is to place the principles of ecological transition at the heart of our decisions.

2

Environmental benefits

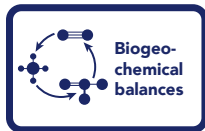
Each icon includes a brief description of the problem associated with it and examples of possible solutions. The lines of action and guidelines of Ville de Terrebonne's Ecological Transition Policy have been developed with these types of solutions in mind.

Let's not forget that our local actions will also lead to regional and global benefits, due to the fact that many environmental issues don't take borders into account.



The decline of biodiversity is perhaps the most serious environmental crisis, given the great ecological services that humans derive from such biodiversity. It is also the most distressing, given the inestimable intrinsic value of the natural wonders of plants and animals.

Our role in species extinction can be limited by curbing overexploitation, chemical pollution, the spread of invasive species and, most importantly, habitat destruction and fragmentation.



The disruption of biogeochemical cycles results, in particular, from the massive use of synthetic nitrogen (N) and phosphate (P) fertilizers for agriculture. Their transport to water bodies increases the proliferation of cyanobacteria (blue-green algae) which take up the oxygen dissolved in the water, to the detriment of other species.

Reducing losses along bio-food chains and effectively recovering phosphorus in wastewater treatment plants can help mitigate this problem.



Climate change is primarily the result of the accumulation of greenhouse gases (GHGs) in the atmosphere. These GHGs absorb some of the infra-red radiation that would normally escape from the Earth into space and then re-emit it, thereby warming the Earth's surface.

Reducing GHG emissions (particularly by reducing the use of fossil fuels) and making infrastructure more resilient to climate change are beneficial actions.



Ocean acidification results from the uptake of carbon dioxide (CO₂), the main human-induced greenhouse gas (GHG). In water, CO₂ reacts chemically in order to lead to a decrease in hydrogen potential (pH). Not having evolved to adapt to these pH levels, various organisms are affected, such as corals, shellfish and crustaceans.

Reducing GHG emissions has a dual benefit for species that are affected by both acidification and warming waters.



The disappearance of natural and agricultural spaces has direct repercussions on a number of planetary boundaries, notably because forests constitute a biodiversity reserve as well as a carbon and water stock. Agricultural land, on the other hand, supports local consumption, among other things.

Agroforestry provides a variety of benefits, including the creation of windbreaks and ecological corridors. Avoiding food products that cause deforestation also helps with a number of planetary boundaries.



Freshwater scarcity is largely a result of wetlands drying up, deforestation, intensive drainage of agricultural land, and land artificialization. This problem can occur even in areas of high rainfall.

The construction of water retention basins, the curbing of land artificialization and the rational management of water withdrawals are all actions that can help ensure the availability of this precious resource and limit conflicts of use.



Novel entities synthesized by humans are constantly introduced into nature. This is notably the case for pesticides, microplastics and medications. Some adverse effects of these entities have been documented, but their diversity is such that it has become virtually impossible to monitor or anticipate their overall effect on human health and the environment.

The principle of precaution calls for limiting the direct or indirect use of such entities, particularly by reducing unnecessary purchases.




Air pollution includes various suspended particles, acid rain precursor gases and tropospheric ozone (to be distinguished from the stratospheric ozone layer). This pollution comes from road transport, wood burning and industrial emissions, among others. In particular, it causes lung diseases.

Indoor air pollution is often forgotten and can be mitigated by adequate ventilation and reductions at the source (elimination of mould, reduction of the use of printers or fragrance diffusers, etc.).



Emissions of ozone-depleting substances have declined since the 1987 Montréal Protocol took effect. Ozone—which protects life on Earth from the sun's ultraviolet rays—is being destroyed by substances such as chlorofluorocarbons (CFCs), which were previously used as refrigerants, aerosol container propellants and foam insulation agents.

Sound management of ozone-depleting substances remaining in some materials and equipment is needed. These actions will facilitate the recovery of the threatened ozone layer.



Four lines of action

The lines of action of Terrebonne's Ecological Transition Policy have been developed according to a mobilizing approach, with each line of action targeting a specific category of stakeholders.

These lines of action are as follows:

1. Integration of the principles of ecological transition as a core component of land use planning
2. Exemplarity of the municipal administration
3. Support for entrepreneurial and cooperative initiatives with ecological objectives
4. Development of a citizen culture of ecological transition

Line of action #1

Integration of the principles of ecological transition in land use planning

Main benefits expected



Land use planning aims to ensure a balance in the spatial distribution of humans and their activities, habitats, facilities, transportation and communication networks, natural environments and any other type of space. The territory as a whole, as a place to live, will be all the more sustainable if it adequately takes into account local environmental constraints and planetary boundaries. A municipality's land use choices reflect its long-term vision and deserve to be planned.

Planning must be done in an integrated manner, considering residential development, the transportation network and the environment. Lastly, collaborative planning is needed in order to address the difficult issue of car dependency.

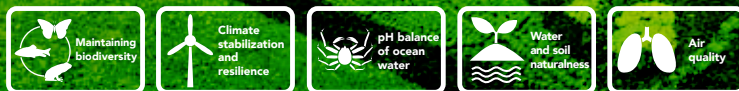
Guidelines

- 1.1 Make sustainable mobility a core component of land use planning, including the optimization of active and public transportation networks.
- 1.2 Maintain and increase the canopy on our territory.
- 1.3 Create complete living environments that allow the majority of daily activities to be carried out within a short distance.
- 1.4 Protect and develop ecological connectivity, including the enhancement of natural environments and agricultural lands.
- 1.5 Regulate the development of built-up areas and the construction of buildings through environmental requirements (energy efficiency, integrated stormwater management, management of heat islands, etc.).

Line of action #2

Exemplarity of the municipal administration

Main benefits expected



The municipal decision-making level is closest to the people. Its leadership on the environmental front is all the more effective when the municipal administration as a whole can set an example. The principle of exemplarity for a public administration is simple: apply to itself what it is asking—or "walk the talk".

In the context of the ecological transition, it is not a matter of achieving perfection, but rather of making the necessary efforts to contribute to this transition through concrete actions and thereby inspiring the other stakeholders on the territory whose cooperation and commitment are also sought.

Guidelines

- 2.1 Replace pesticides with environmentally-responsible alternatives.
- 2.2 Reduce energy and drinking water consumption in municipal buildings and other municipal facilities.
- 2.3 Reduce greenhouse gas emissions generated by municipal buildings and vehicles.
- 2.4 Develop and implement environmentally-responsible procurement practices.
- 2.5 Encourage and promote sustainable mobility among municipal employees.
- 2.6 Optimize the management of waste according to the 4Rs (reduction at source, reuse, recycling and recovery).
- 2.7 Make faster progress in the implementation of electric charging stations.

Line of action #3

Support for entrepreneurial and cooperative initiatives with ecological objectives

Main benefits expected



Many businesses are very aware of planetary boundaries and want to play a role in the ecological transition. Some companies are directly focused on introducing environmental solutions and clean technologies to the market, while others are trying to maximize the eco-design of their products or provide their services in the most environmentally-friendly way possible.

For a municipality, facilitating businesses' transition to environmental action is an indirect line of action, as businesses are often the driving force behind innovation and new trends.

Terrebonne wants to provide a coherent framework as well as effective incentives to industrial firms, businesses and institutions taking part in the ecological transition on its territory.

Guidelines

- 3.1 Develop circular and local economy.
- 3.2 Define eco-responsibility indicators for industrial firms, businesses and institutions (ICIs) and promote organizations that stand out.
- 3.3 Supervise the management of materials from construction, renovation and demolition sites (CRDs).
- 3.4 Reduce food waste in the food industry by promoting partnerships with the community.
- 3.5 Mobilize the business community and create a network of ambassadors for the ecological transition.
- 3.6 Encourage and support commercial and community-based urban agriculture.
- 3.7 Take part in the creation of cooperative repair, tool-sharing and reuse workshops.



Line of action #4

Development of a citizen culture of ecological transition

Main benefits expected



Maintaining biodiversity



Climate stabilization and resilience



Preservation of natural and agricultural spaces



Water availability



Water and soil naturalness

In order for the challenge of the ecological transition to be met, it is necessary for the knowledge and values associated with it to be rooted in culture; therefore, public authorities must give residents the opportunity to be exposed to the scientific content that justifies the ecological transition and to be able to develop the expertise and habits that enable its implementation.

Residents tend to get involved to the extent of their eco-citizenship; consequently, they are more likely to become involved if they are aware that humanity and its environment form a whole and that the protection of one cannot be achieved without the other. In order to encourage greater involvement by residents, it is therefore important to prioritize awareness-raising and simple information.

The ecological transition can also be carried out by groups of residents who get together to bring about sustainable ecological transformations.

Guidelines

- 4.1 Use municipal powers to reduce the number and quantity of single-use and disposable products.
- 4.2 Develop eco-responsible reflexes among promoters of events held on the territory of Terrebonne.
- 4.3 Support resident and school initiatives that support the ecological transition.
- 4.4 Encourage residents to adopt eco-responsible habits.
- 4.5 Inform, raise awareness and educate residents on the environmental impacts of their everyday actions.





Terrebonne
Une histoire de vie