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EVALUATION OF THE SECOND NATIONAL STRATEGY ON ENDOCRINE DISRUPTORS

*Towards a Future
“Zero exposure to Endocrine Disruptors” Strategy*

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Summary

Endocrine disruptors (EDCs) are chemical substances that interfere with hormonal functions in living organisms¹, potentially impacting human health in various areas: reproduction (sperm quality, early puberty, infertility...), cancer (breast, prostate...), neurodevelopment (IQ decline, behavioral disorders...), and metabolism (diabetes and obesity...)². Some health effects may manifest in the long term and even across generations. EDCs also affect wildlife (feminization, bone damage, reduced testosterone levels, cryptorchidism, etc.) and contribute to biodiversity loss.

These substances are found in numerous everyday and occupational products (household cleaners, detergents, pesticides, cosmetics, food, etc.), and consequently, in water, air, and soil.

Adopted in September 2019, the second National Strategy on Endocrine Disruptors (SNPE2) aimed to reduce exposure of both the population and the environment to EDCs. Its action plan is structured around three pillars: "Training and informing" (13 actions), "Protecting the population and the environment" (28 actions), and "Improving knowledge" (9 actions).

SNPE2 follows the first national strategy launched in 2014, which positioned France as a pioneer in this field. Today, France remains one of the European countries most engaged in addressing endocrine disruptors, alongside Belgium, Germany, and Denmark. Public awareness has increased significantly—88% of the French population has heard of EDCs.

Since 2019, progress has been made, especially at the **regulatory level**. Nationally, the 2020 Anti-Waste Law for a Circular Economy (AGEC Law) defined a list of 128 EDCs³ and established consumer rights to access product information. At the European level, the December 2022 reform of the CLP Regulation (Classification, Labelling and Packaging) introduced specific labeling requirements for substances and mixtures containing EDCs, which will be implemented starting in 2025.

Despite these major steps—where France played a leading role—European regulatory frameworks remain fragmented across horizontal and sector-specific texts. The postponement of the REACH Regulation reform (Registration, Evaluation, Authorization and Restriction of Chemicals) has been a significant setback to the EU's chemicals strategy, where EDCs are a central concern.

Overall, the mission identified 53 regulatory measures taken under various EU frameworks to ban or restrict the use of substances due to their endocrine-disrupting properties. Although many of these were introduced in the past three years, this figure remains low compared to the number of potentially endocrine-disrupting substances (906 identified by the French Agency for Food, Environmental and Occupational Health & Safety—ANSES—in 2021)⁴.

The pace of substance evaluations has accelerated (43 evaluations by the French Agency for Food, Environmental and Occupational Health & Safety between 2019–2023, compared to 18 between 2014–2018), but still falls short given the thousands of chemicals on the market⁵. While various lists of potential EDCs have been created, their lack of harmonization and prioritization leads to confusion and inefficiency.

¹ According to the WHO, an endocrine disruptor is an exogenous substance or mixture that alters function(s) of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or (sub) populations.

² These health conditions and effects may have a confirmed link to EDC exposure (with sufficient evidence according to the scientific literature) or a suspected link (with plausible levels of evidence).

³ Decree of September 28, 2023.

⁴ 906 substances according to the list established by ANSES in April 2021.

⁵ 1,300 substances marketed in quantities of more than 100 tons per year and registered in REACH remain to be evaluated.

Public information efforts have had mixed success. The "First 1000 Days" website, which addresses EDC exposure in early childhood, has been well received. However, consumer information remains fragmented, partly due to the limitations of the Scan4Chem app.

Some progress has been made in **continuing education** for healthcare professionals, but overall training levels—both initial and continuing—remain limited. This is especially true for early childhood professionals, future managers in production sectors, and workers in high-exposure fields like chemical industries, agriculture, and cosmetology, where training on EDCs is virtually non-existent.

Research has benefited from financial support from the National Research Agency (ANR) and the Environmental-Health-Work Research Program (PNR EST), funding nearly 100 projects between 2019 and 2023. The PEPPER platform has helped standardize testing methods to identify endocrine-disrupting properties (11 methods in pre-validation, 6 of which are in the OECD validation program). At the EU level, France plays a key role in the PARC project (European Partnership for the Assessment of Risks from Chemicals), several aspects of which (including overall coordination) have been entrusted to French teams. Nonetheless, important fields such as clinical, environmental, and social science research remain largely unexplored (clinical research, environmental research, humanities and social sciences, etc.).

Health monitoring has revealed widespread population exposure to various EDCs, although changes over time cannot be assessed due to a lack of baseline data. A new national biomonitoring program, ALBANE, will be launched in 2024 and will include a strong focus on EDCs.

Disease surveillance has improved in the area of reproductive health, with alarming trends such as declining male fertility. Surveillance is being expanded to cover developmental, metabolic, and cancer-related conditions, using integrated approaches that combine environmental and health data.

Environmental monitoring has made progress in indoor air quality (notably through the second national housing survey), but other compartments (ambient air, water, soil) are still lacking coherent, harmonized data, due to fragmented substance lists.

Regulatory enforcement remains inconsistent. Inspections by the Directorate General for Competition, Consumer Affairs, and Fraud Control (DGCCRF) have declined slightly in recent years, with a stable 15% non-compliance rate. Testing is limited by technical capacity, and enforcement at borders suffers from gaps in documentation, inability to recheck goods cleared in other EU countries, and challenges linked to online commerce⁶. The scope of controls has also been restricted to that of the national campaign on toy safety. As for border controls carried out by customs authorities, their effectiveness is compromised by several factors: the impossibility of re-checking products that have already been cleared by other Member States, a lack of documentation, and their unsuitability for e-commerce.

On **substitution**, SNPE2's goals have clearly not been met. Apart from information tools (such as a website created by the National Institute for Industrial Environment and Risks—Ineris), calls for proposals have drawn little response from industry, and earmarked budgets have gone unused.

Meanwhile, numerous **local initiatives** (led by NGOs, local governments, state services, health insurance agencies, daycares, maternity wards, etc.) have emerged to address environmental risks, including EDCs. Although largely outside the SNPE2 framework—which offers no dedicated funding or operational support—these actions have fostered positive territorial dynamics in environmental health, especially for vulnerable groups like pregnant women and young children.

⁶ Joint service of the laboratories of the economic and financial ministries

In terms of **effectiveness**, SNPE2 has delivered only modest results: while some progress was made, it fell well short of the 2019 targets. Moreover, weaknesses in monitoring and indicator tracking make it impossible to determine whether the strategy's main goal—reducing population and environmental exposure to EDCs—was achieved.

The **mission considers the strategy overall to be relevant** and aligned with the challenges posed by EDCs, though it is insufficiently action-oriented. While the focus on knowledge generation is justified by the complexity of the issue, operational follow-up on emerging risks remains lacking. The European dimension is appropriately emphasized, but the “One Health” approach and socioeconomic inequality considerations are underdeveloped.

The **strategy's coherence** was also assessed. Externally, SNPE2 aligns with several national health and environment plans, especially the fourth National Environmental Health Plan (PNSE4)⁷. Alignment with sectoral plans (e.g., PFAS, chlordcone, Ecophyto) is more tenuous, except for the micro-pollutants plan, which overlaps more clearly. Internally, the strategy is mostly coherent but suffers from overly numerous and sometimes irrelevant indicators and poor action planning.

From a **governance** standpoint, stakeholder follow-up committees (established in 2021) have provided useful opportunities for discussion, but they have not functioned as actual oversight bodies. That role has fallen more to the steering committee—composed solely of central government bodies—at the expense of strategic foresight. The SNPE2 also lacked sufficient political backing. Although coordination between health and environment ministries was consistent, involvement from other ministries was uneven and sometimes inadequate.

Given the risks EDCs pose to both human and ecosystem health, the mission recommends continuing and strengthening the momentum initiated by the first two strategies. Ideally, this should be done within a broader “One Health” framework or a comprehensive National Environmental Health Strategy led at the highest interministerial level. If that is not feasible, **the mission recommends drafting a third National Strategy on Endocrine Disruptors (SNPE3)**.

SNPE3 should define a long-term vision (10 to 15 years), with general objectives and priorities. Such a strategy is essential to maintain France's leadership within the EU and to mobilize national and local stakeholders. It should be accompanied by a focused five-year action plan, enabling government agencies to channel efforts effectively.

SNPE3 must strike a better balance between action and knowledge. In addition to education and information, regulation and enforcement, substitution, emission reduction, and support for local initiatives should take center stage.

More broadly, the focus should shift from “protecting the environment and population” (as in SNPE2) toward **“zero exposure to EDCs”**—in line with the EU Chemicals Strategy for Sustainability's vision of a “toxic-free environment.”

The mission recommends organizing SNPE3 around three core objectives:

- **Generating Knowledge:** Develop research through a national exposome program; accelerate substance evaluations and design a European testing strategy; implement integrated monitoring combining environmental and health data.
- **Educating and Informing:** Ensure effective consumer information; reach vulnerable populations with awareness efforts; make EDC training universal for highly exposed professions.

⁷ Of the 37 plans or strategies that revolve around the PNSE4, no fewer than 12 are related to the SNPE2.

- **Reducing Emissions:** Broaden restrictions on EDCs; enhance border and domestic product inspections; restart substitution initiatives with targeted support; operationalize surveillance alerts; explore paradigm shifts in production and consumption.

In terms of **governance**, the success of SNPE3 requires the commitment of all ministries, including at the political level. Beyond the coordination provided by the ministries of health and environment, the mission considers it essential to involve more actively the ministries most directly concerned (such as agriculture, industry, and research) from the early stages of strategy and action plan development.

Lastly, the action plan attached to SNPE3 must be supported by a **multi-year budget**, including dedicated funding for the implementation of new and EDC-specific actions, in addition to resources already planned or committed. An annual presentation of this budget (new measures and already planned or ongoing ones), along with its execution, should be made to all stakeholders.