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**Twinning Project**  
**Support to implementation of Health Impact Assessment Practice in**  
**Georgia**  
**GE 20 ENI HE EN 02 21**

**Report on the study visit to France 24th to 29th of April 2023**



MINISTRY OF INTERNALLY DISPLACED PERSONS  
FROM THE OCCUPIED TERRITORIES, LABOUR,  
HEALTH AND SOCIAL AFFAIRS OF GEORGIA



საქართველოს კონტროლი და  
საზღვარგარეთის ადგილობრივი  
დაავადებების ცენტრი  
NDCP  
GEORGIAN NATIONAL CENTER FOR DISEASE  
CONTROL AND PUBLIC HEALTH



**Focus :** Health in environmental assessment, air pollution, coordination between health and environmental authorities at different levels, environmental burden of disease, , coordination at local level for EIA/SEA

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## Objectives of the study visit :

- Information and experience sharing on **coordination of environment and health authorities** at national and local level, platforms and institutions
- Presentation of **tools and data for quantifying the environmental burden of disease**
- **Air quality and health as public policies :**
  - o Alert thresholds and risk communication
  - o Quantifying health impacts of air pollution (measured, modeled and intervention) and its economic impact
  - o Indoor air pollution

The proposed study visit is linked with the 4 components of the twinning project :

- **Legislation :**
  - o Directives on EIA and SEA with involvement of health authorities in environmental assessment
  - o Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe
- **Capacity building :** organization of teams at national level for quantitative HIA, and at local level for health in environmental assessment ; tools for quantifying health impacts and environmental burden of disease in France
- **Data and exchanges with other public institutions :**
  - o Air quality data, forecasting and modeling
  - o Platform “Greendata for Health” : [Green Data For Health | Accueil \(ecologie.gouv.fr\)](http://Green Data For Health | Accueil (ecologie.gouv.fr))
- **Communication and public participation :**
  - o Alert thresholds for air pollution and communication on risk management

## Participants :

- Paata Imnadze – Scientific Director, Deputy Director of the National Center for Disease Control and Public Health (NCDC) ;
- Nia Giuashvili - Advisor to the Director General of the NCDC on Environmental Health ;
- Nana Ninashvili – Senior Specialist, Environmental Health Department, NCDC ;
- Maia Kereselidze– Head of Medical Statistics Department, NCDC;
- Lali Ebanoidze - Head of Legal Division, NCDC;
- Nana Gabriadze – Head of Environmental Health Department, NCDC;
- Maia Javakshvili - Deputy Head of Climate Change and Environment Department, Ministry of Environmental Protection and Agriculture
- Noe Megrelishvili, Head of Ambient Air Division, Ministry of Environmental Protection and Agriculture
- Marine Arabidze, Head of Environmental Pollution Department, National Environmental Agency



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## Institutions visited



### Santé Publique France

As a scientific agency and expert in the health field, Santé Publique France ([Accueil\\_santepubliquefrance.fr](http://Accueil_santepubliquefrance.fr)) is in charge of: i) epidemiological observation and surveillance of the health status of populations; ii) monitoring health risks threatening populations; - the launch of the health alerts; iii) health promotion and reduction of health risks; iv) the development of prevention and health education; v) preparedness and response to health threats, alerts and crises.

Santé Publique France has a staff of +60 people working on environmental health and climate change. Santé Publique France is involved in different quantitative health assessment and environmental health burden of disease. Through its work, Santé publique France shows that the implementation of actions to reduce air pollution in the long term would improve the health and quality of life of the population. Through the Air and Health Surveillance Program (PSAS) and the results it has produced since its inception in 1997, the Agency monitors and characterizes the short- and long-term effects of air pollution on health, and conducts quantitative health impact assessments.

Training by Santé Publique France is essential for local actors and communities to implement quantitative air pollution health impact assessments, a very useful tool to guide actions to reduce the impact of air pollution. These QHIAs are intended to help in the decision making process regarding interventions to reduce pollution. They allow us to estimate the achievable health benefits of air quality improvement scenarios.

### Presentations :

- Presentation of Santé Publique France and Environmental Health Department
  - o Sebastien Denys, Director of the Environmental and Occupational Health Department, Project Leader (France)
    - Pr sentationvisite g orgien avril AP en-GB.pptx
- Estimating the environmental burden of disease
  - o Sabrina Delaunay, Surveillance of environmental and work-related diseases Unit
    - Pres\_EBoD\_Georgie\_VF.pdf
  - o Julien Caudeville (remote), Surveillance of environmental and work-related diseases Unit
    - dlgrgn\_Spf\_vf.pdf
- Biosurveillance piloted by Environmental and Occupational Health Department; Cl mence Fillol, Exposure Monitoring Unit
  - National human biomonitoring program\_24042023.pptx
- Plan Surveillance Air et Sant  / Air and Health surveillance plan (25 years) / Sylvia Medina, Coordinator of the French Surveillance Programme on Air Pollution and Health
  - DSET\_Psas\_Study visit Georgia\_24April2023.pdf

**Specific request** : Estimation of blood lead levels in the French population using two complementary approaches: Esteban (2014–2016) as part of the human biomonitoring program and the national surveillance system for childhood lead poisoning (2015–2018)

1-s2.0-S0013935122009574-main (2).pdf



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## Directorate General of Health



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The role of the **Directorate General of Health** in the Ministry of Health and Prevention ([Ministère de la Santé et de la Prévention \(sante.gouv.fr\)](http://sante.gouv.fr)) is to develop rules, standards, recommendations and information for the public and health professionals; the Regional Health Agencies (ARS) are responsible for monitoring and controlling the health of environments. In the field of environmental health, the Ministry of Health relies on the expertise of the National Agency for Environmental, Food and Occupational Health Safety (ANSES), Santé Publique France (SpF) for the epidemiological and biomonitoring aspects, and the High Council for Public Health (HCSP) for risk management assistance. SpF contributes to the promotion of healthy behaviors and environments.

The "health and environment" field is at the heart of national and international intersectoral issues. The National Environmental Health Action Plan (PNSE) is one example. France has implemented 4 NEHAP and made a comprehensive assessment of the last 3 ones.

The "health and environment" field is at the heart of national and international intersectoral issues. The National Environmental Health Action Plan (PNSE) is one example. France has implemented 4 NEHAP and made a comprehensive assessment of the last 3 ones.

Presentations :

- EN- Présentation ministère de la santé DGS EA Géorgie.pptx
- Risk communication and management : Information thresholds and alert thresholds for outdoor air pollution Presentation : EN- Outdoor air pollution episodes in France.pptx
- Indoor air quality legislation : risks assessments and management EN -présentation Indoor Air Quality.pptx



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Ministère de la Transition écologique et de la Cohésion des territoires

Ministère de la Transition énergétique

## Directorate General for Risk Prevention

The Directorate General for Risk Prevention (DGPR) is the French administration, attached to the Ministry of Ecological Transition and Territorial Cohesion (Ministry of Environment), which brings together all the State services responsible for developing and implementing policies relating to the knowledge, evaluation, prevention and reduction of chronic, accidental, technological and natural risks.

The DGPR develops and implements policies relating to:

- the knowledge, assessment, prevention and reduction of chemical, biological or radioactive pollution, as well as the assessment, as well as various environmental and health hazards (e.g. noise in particular);
- knowledge, evaluation and prevention of natural risks (especially floods) or those linked to human activity and to the safety of hydraulic works;
- waste management (prevention, recovery and treatment, circular economy)
- and the environment, as well as other "emerging" risks (indoor air, electromagnetic waves, nanotechnologies, endocrine disruptors, etc.)

Presentations :



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- National Environmental Health Action Plan 4 **P** 1. Présentation\_PNSE4\_EN\_vf.pptx
- Environmental Assessment methodology and sanitary norms : **P** 2. Présentation eval impacts sanitaires\_rencontre géorgiens 26-04\_V5.pptx
- GreenData4Health project : **P** 3. 202304\_Georgie\_CGDD\_GD4H English version\_VF.pptx



## Regional Health Agencies

In each region, the ARS (Regional Health Agency) implements public health policy in conjunction with the services responsible for occupational

health, school and university health and maternal and child protection.

[Agence régionale de santé Bretagne | Agir ensemble pour la santé des Bretons \(sante.fr\)](#) / [Agence régionale de santé Ile-de-France | Agir pour la santé en Île-de-France \(sante.fr\)](#)

In the health-environment sector, its competence includes :

- water & food: quality of water for human consumption, quality of bathing water, swimming pools and recreational sites, protection of water resources;
- indoor environment: in the habitat, indoor air quality, fight against undignified housing;
- outdoor environment: noise pollution, outdoor air quality, waste from healthcare activities, impact on health of human activities.

According to the Environmental Code and within environmental assessment, the regional health agencies are consulted by the environmental authorities at the screening stage of the EIA/SEA and may be involved in the SEA in a consultative way. The RHA decides whether or not they will be involved in the EA. Their inputs can focus on sanitary elements (especially related to water quality protection), environmental health and health and urban planning.

Presentations :

- Dany Saba, Sanitary Engineer at the Regional Health Agency in Ile-de-France, **P** 4. Case by case procedure ARS-IDF en-GB.pptx
  - Health in Environmental Assessment : tools for health in Environmental Assessment and screening process
  - Focus on air pollution in Health in Environmental Impact Assessment and examples with local projects in the Paris area
  - Presentation of the GIS tools for sanitary and health statements
- Regional Health Agency in Brittany **P** 230428\_Géorgiens\_Présentations\_ARS en-GB.pdf
  - Presentation of the Environmental Health Department, Anne Serre, Director of the Environmental Health Department
  - Assessment of PRSE3 and elaboration of PRSE4 : Regional Environmental Health Action Plan
  - Focus on air measures : Plan Climat Air Énergie territorial - Climate, Air and Energy Plan



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## French School of Public Health / Ecole des Hautes Etudes en Santé Publique

The School of Advanced Studies in Public Health ([Ecole des hautes études en santé publique \(EHESP\) | Ecole des hautes études en santé publique](#)) is an international institution of scientific, cultural and professional nature - structured around four integrated departments - quantitative methods in public health, environment and occupational health, Institute of management and human and social sciences to provide high-quality education and applied research. It has different partnership with numerous research centres and collaborations with organizations such as WHO (Collaborating center on disability and on health in urban planning), the World Bank or the European Union (PARC project) to foster state of the art research and projects.



In the field of environmental health, the EHESP certifies the environmental health engineers/sanitary engineers and works with many partners to implement health-in-all-policies (Ministries, municipalities, regional health agencies, civil society organizations, ...).

Its environmental health laboratory - LERES - is a reference lab and offers a wide range of analysis of environmental media quality parameters (water, air, solid media including dust) in order to meet the needs of its partners (industrial, design office, local authority or public bodies).

## Expertise France

Expertise France ([Home - Expertise France](#)) is the French international technical cooperation agency, working under the dual supervision of the Ministries of Foreign Affairs and the Economy, within the framework of the foreign policy of development, solidarity and influence of France. It designs and implements projects which aim to contribute to the balanced development of partner countries, in line with the Sustainable Development Goals (SDGs) of the 2030 Agenda and the priorities of France's external action.



## AirParif

Established in the 70s, AirParif ([Accueil Airparif | Airparif](#)) is one of the 18 Approved Air Quality Monitoring Associations (AASQA) present in each administrative region in metropolitan France and overseas. The AASQA are independent and carry out 4 main missions:

- Monitor and forecast air and atmosphere through measurements, modeling (maps and scenarios) and inventories (air and energy emissions inventory)
- Inform and sensitize the population and local actors on a daily basis and in the event of pollution episodes
- Support decision-makers by evaluating actions to combat air pollution and reduce the population's exposure to air pollution
- Improve knowledge and participate in innovative experiments in the territories.



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Airparif's work helps inform public decisions, associations and companies committed to improving air quality, while informing and contributing to changes in citizens' behavior. They nourish French health expertise and scientific and technical knowledge. Its expertise leads him to act as a reference in France and internationally.

Presentations :

- Measurement network Airparif measurement network.pdf
- Regional modeling 20230425\_Regional Modelling \_Delegation\_Georgie.pdf
- Air pollution forecasting Air pollution forecasting at airparif.pdf
- Impact Assessment of Low Emission Zone 20230417 Presentation ZFE Délégation Georgie.pdf
- Scenario "WHO guidelines trajectory" - Fabrice Joly, Head of Analytical Department; Noémie Pauchont, Air quality engineer Presentation : Présentation\_traj\_scenarisation\_Airparif\_20230425\_Géorgie.pdf

## Regional Environmental Authority

The Regional Environmental Authority Missions (MRAe - [L'Autorité environnementale | IGEDD \(developpement-durable.gouv.fr\)](https://www.developpement-durable.gouv.fr/L-Autorite-environnementale-IGEDD)) were created in 2016, alongside the Environmental Authority, in order to be able to express independent opinions on all "plans/programmes" and to contribute to a better democratic functioning for the preparation of environmental decisions. This body gives opinions, made public, on assessments of the impacts of major projects and programmes on the environment and on management measures to avoid, mitigate or compensate for these impacts, for example, the decision on a motorway route, the construction of a TGV line or a high-voltage line, but also of a local project, as soon as it depends on the Ministry of Ecological Transition and Territorial Cohesion (MTECT), and is subject to impact study.



European and national legislation provides that environmental assessments of major operations are subject to the opinion, made public, of an "environmental authority". These requirements are intended to facilitate public participation in the preparation of decisions affecting it (Aarhus Convention, Constitutional Charter, and to improve the quality of projects before decisions are taken. The authority may be the Minister for the Environment (MTES), or locally on his behalf the prefects, when this Minister is not himself responsible for the operation under some of his other attributions (transport, energy, urban planning, etc.).

Presentation : 20230428georgieICPEsv2 en-GB (1).pdf



Réseau  
français  
**Villes-Santé**

[Réseau français Villes-Santé \(villes-sante.com\)](https://villes-sante.com)

The objective of the French Healthy Cities Network is to raise awareness, stimulate debate based on reliable information and above all encourage action in health through all public policies and at all levels of the territory. For its members, the Network relays national and international information on public health and promotes the exchange of experiences. It regularly organizes retreats, conducts working groups and regularly publishes the results of its work. The French Healthy Cities Network is accredited by the World Health Organization (WHO) and as such, participates in the actions of the WHO European Healthy Cities Network.



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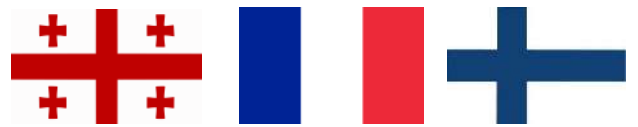
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დაავადებების კონტროლის  
და პირდაპირი დაცვის  
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The mission of the French Healthy Cities Network is to support cooperation between cities or municipalities that have the will to pursue policies favorable to health and quality of urban life, by allowing cooperation between its member cities and by facilitating exchanges between French Healthy Cities and the WHO (World Health Organization) European Healthy Cities Network as well as national partners.

The French Healthy Cities Network is accredited for a period of five years to the European Healthy Cities Network led by the WHO Europe Office, based in Copenhagen. Within this framework, it participates and contributes actively to the life of the European Network which is based on 1,400 cities and 21 national networks. The French Network is linked to the European Healthy Cities Network by its working methodology, which is reflected in the membership criteria. The French Network is represented on the Political Committee of the European Network by Yannick Nadesan, President of the Network, and on the Advisory Committee by Maude Luherne, Coordinator of the Network. The European Network meets regularly in thematic working groups, directly or indirectly linked to the different components of the United Nations (WHO International, UN Habitat, UNICEF). It also supports the organization of meetings of national networks within the WHO European Region, thus participating in the exchange of practices and experiences.

## **Discussions, presentations and main points of the study-visit**



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Monday 24th April 2023

Santé Publique France – Department of Environmental and Occupational Health

- Presentation of Santé Publique France and Environmental Health Department



Sebastien Denys, Director of the Environmental and Occupational Health Department at Santé Publique France and Project Leader (France), introduced the study visit and day with a presentation about the international and national context and agenda, progress and challenges related to environmental health and especially the new risks of climate change and chemicals.

Presentation : P Présentationvisite géorgien avril AP en-GB.pptx

- Estimating the environmental burden of disease

Sabrina Delaunay, from the Surveillance of environmental and work-related diseases Unit of Santé Publique France, presented the international standard "Burden of disease" : how environmental factors and their impact on public health can be quantified, how Santé Publique France is doing the work and what are the necessary data for it.

Presentation: Pres\_EBoD\_Georgie\_VF.pdf

The concept was discussed with the Georgian colleagues in the light of the environmental and medical data available in Georgia and especially the link with scientific research and the evidence-based environmental dose-response relationship. The quantification of the environmental burden of disease is a strong tool for communication, policy and action at local level with references and comparison to other countries. Furthermore, it can serve as a baseline within a HIA.

Julien Caudeville, from the Surveillance of environmental and work-related diseases Unit, introduced an example with estimating the burden of diseases of some chemicals. Presentations : dlgrgn\_Spf\_vf.pdf

- Biosurveillance piloted by Environmental and Occupational Health Department

In order to get a good picture of the exposure of a population to environmental risks, a human biomonitoring system is essential to identify the most exposed populations (groups, geography, risks, ...) : Clémence Fillo, from the Exposure Monitoring Unit, introduced the National Human Biomonitoring program in France with its specificities (in terms allowing the programme to be sustainable over the long-term).



Presentation : P National human biomonitoring program\_...

- Plan Surveillance Air et Santé / Air and Health surveillance plan (25 years anniversary)

Sylvia Medina, Coordinator of the French Surveillance Programme on Air Pollution and Health, introduced the PSAS (Plan Surveillance Air et Santé), started in 1997 and especially the road from 1998 with the first quantitative HIA on air pollution with the WHO, and how thanks to perseverance and research more and more QHIA have been done at a finer scale (geographically and for projects).

Presentation : DSET\_Psas\_Study visit Georgia\_24April2023.pdf

An important part concerns the presentation of such results to the public and to decision-makers. As mentioned during the discussion, the question in 1997 was very politicized (famous french cartoonist in Le Monde shows a politician suffering a heart-attack, the doctor says "Air pollution? Yes, and media coverage of the air pollution"; another one shows how the City of Paris tried to minimize the study or silence the health agencies





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and researchers at that time). It is therefore **crucial for public, health and environmental authorities to have a common message**, and be informed from the beginning of the studies which is the framework of collaboration of the twinning project with the NEA and Tbilisi City Hall.

- **Meeting with the General Director of Santé Publique France**

The meeting with Dr. Caroline Semaille, Director General of Santé Publique France, allowed to have an interesting conversation about the role of national public health institutes in the environmental field, in the light of new challenges : climate change (and notably more frequent and intense heat waves, as well as new zoonoses and vector-borne diseases) and post-COVID. **The concept of “One health” or “planetary health” is promoted in many strategic documents and is implemented in different research activities and now in some policies**, linking the biodiversity loss and climate change to many health impacts and losses. “One Health” is a key pillar of the 4th National Environmental Health Action Plan in France (2021-2025) “One Environment, One Health” and its regional implementation.



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Tuesday  
25th April  
2023

**Ministry of Health and Prevention**

**Directorate General for Health - Outdoor Environment and Chemicals**



**MINISTÈRE DE LA SANTÉ ET DE LA PRÉVENTION**

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Caroline Paul introduced the meeting by presenting the work of the Ministry in environmental health and Outdoor Environment especially.

Presentation : [P EN- Présentation ministère de la santé DGS EA Géorgie.pptx](#)

**Risk communication and management : Information thresholds and alert thresholds for outdoor air pollution**

Presentation : [P EN- Outdoor air pollution episodes in France.pptx](#)

The Georgian legislation defines information and alert thresholds according to the EU Directive on Cleaner Air (nitrogen dioxide and ozone), the French legislation goes further and especially with PM10 with warnings and automatic messages when PM10 ≥ 80µg/m3 or PM10 ≥ 50µg/m3 during more than 3 days.

	NO <sub>2</sub>	O <sub>3</sub>	PM <sub>10</sub>
<b>INFORMATION</b>	200 µg/m <sup>3</sup>	180 µg/m <sup>3</sup>	50 µg/m <sup>3</sup> (daily average)
<b>ALERT</b>	400 µg/m <sup>3</sup>	1/ 240 µg/m <sup>3</sup> 2/ 300 µg/m <sup>3</sup> (for 3 hours) 3/ 360 µg/m <sup>3</sup>	80 µg/m <sup>3</sup> (daily average)

When there is an exceeding the information threshold, health and public authorities disseminate health messages (regulatory, developed by an expert group) : [Création d'un kit communication - Alliance des collectivités pour la qualité de l'air - Présentation \(alliancequaliteair.fr\)](#)

When an alert threshold is exceeded, the prefect can choose from a list of actions to decrease emission related to the industrial, transport, residential and tertiary as well as agricultural sector, (e.g. speed reduction, ban on the most polluting vehicles, closure of factories, ban on wood burning). The Order of April 7, 2016 on the triggering of prefectural procedures in case of ambient air pollution episodes details the options available at local level to be chosen by the Prefet : [W List of emission reduction when exceedance of alert thresholds.docx](#) and their transcription at the local level : [AP cadre départemental 2020 signé.pdf](#)

The approach here is to decrease emission during the pollution peak, but it is being revised to also limit exposure of the population and not only act on emission reduction. The attributable death part

**Risk assessment, communication and management of indoor air pollution**

Presentation : [P EN -présentation Indoor Air Quality.pptx](#)

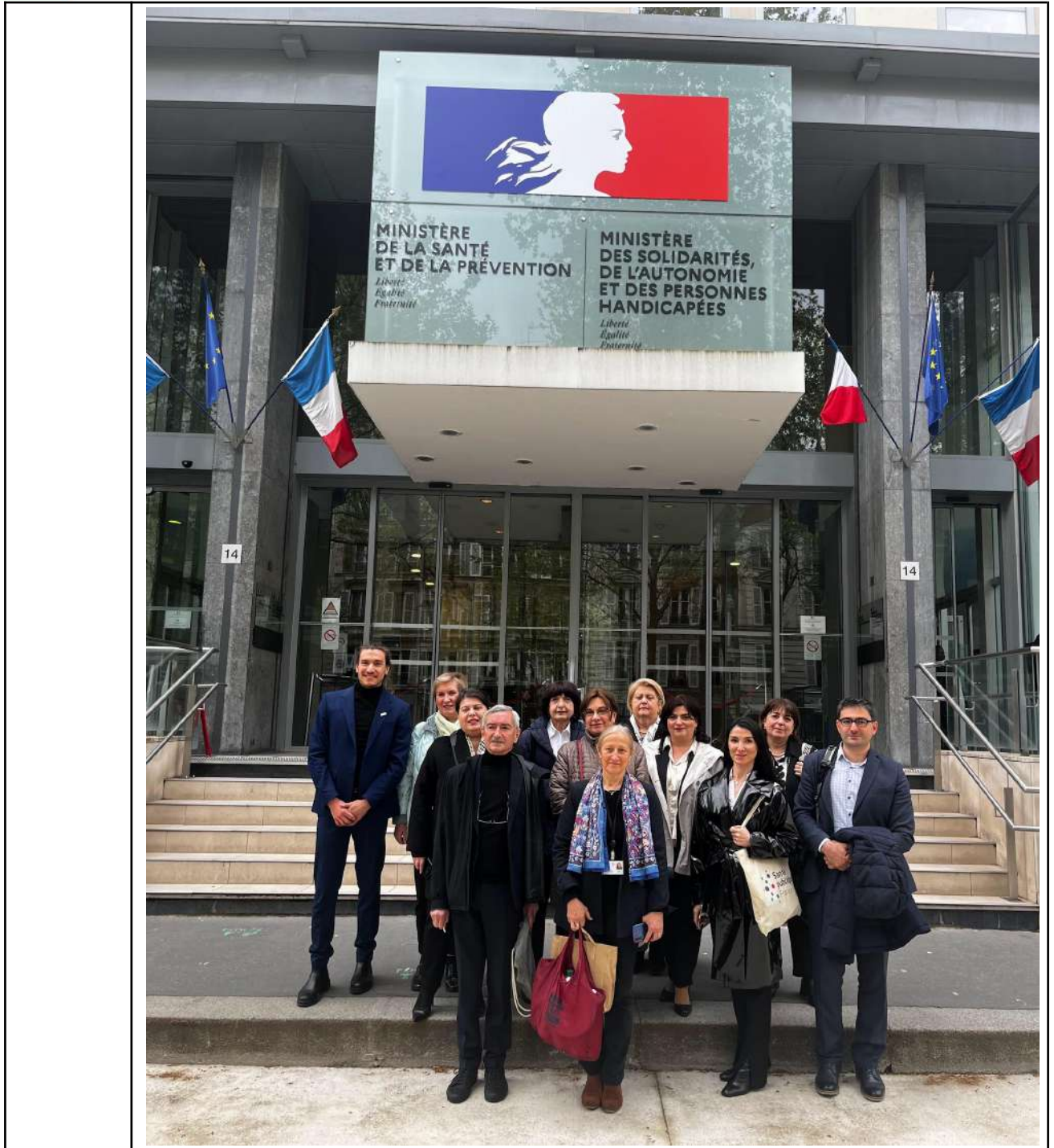
The question of indoor air quality is very pressing issue (80% of our time is spent in an enclosed environment with the possible presence of pollutants from the outside and numerous chemical substances emitted inside the premises (building, furnishing and decorative materials, glues, combustion appliances, human activities (smoking, cooking, maintenance, office automation, etc.).

France has introduced a mandatory indoor air quality monitoring and risk management system defined at national level in the environmental code, compulsory in certain establishments open to the public : kindergartens, schools, leisure centres (since 2018) and high schools (since 2020). In line with other action plans on environmental health, the question of radon and asbestos are also specific challenges in some areas or occupations in France (Britanny for radon for instance ; construction works for asbestos).





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### AIRPARIF

Presentation of Airparif: Governance, missions and activities by the Director General, Karine Léger

Airparif's reference air quality monitoring network (Dr. Jordan Bureau, Air quality engineer, forecaster)

Presentation : Airparif measurement network.pdf

EU Cleaner Air Directive set the minimum requirements for an air quality monitoring network. The Ile-de-France region decided to have a stronger monitoring system with many parameters and different stations (rural, background and traffic). In order to be used for decision making to improve air quality, a monitoring network must be reliable though :

- maintenance and calibration
- organization and implementation of daily data validation and associated tools
- Data check – statistical analysis : data interpretation to see what lessons can be learned on the day to day pollution, trend analysis

This allows for different methodologies for assessment of air quality and related health risks (Fixed measurements; indicative measurements ; Modelling ; Objective-estimation)

### Modeling tools (Dr. Eve Lecoeur, Modeler)

Presentation : 20230425\_Regional Modelling \_Delegation\_Georgie.pdf

Mathematical representation technique of phenomena of a physical, chemical or biological nature, which enable to obtain an information on air quality out of sampling points and out of sampling periods and which meet data quality objectives

Presentation of different modelling systems, data inputs and their application: CHIMERE, ESMEALDA, HORAIR, SURVOL, HIGH-RESOLUTION MODELLING FOR URBAN PLANNING PURPOSES. Focus on a multi-scale chemistry-transport model for atmospheric composition analysis and forecast : [CHIMERE chemistry-transport model \(polytechnique.fr\)](http://CHIMERE.chemistry-transport.model.polytechnique.fr)

### Air quality forecasting, information and alert procedure (Dr. Jordan Bureau, Air quality engineer, forecaster)

Presentation : Air pollution forecasting at airparif.pdf

Presentation of the forecasting team, as well as the data inputs required for forecasting : meteorological data, monitoring network data, near real time measurement of particles chemical composition

	ESM	AS	Prev'Air	Prévisionniste
Good forecast	9	8	1	11
Not planned episode	5	5	13	3
False alert	22	9	2	4

The technologies used in AirParif allow to identify the sources of pollution during a pollution episode and support decision-makers to take the necessary measures to decrease the emissions. For example, the following episode of air pollution episode was mostly due to ammonium and nitrate emissions (agricultural sector) from import of the neighboring areas of the Ile-de-France region.

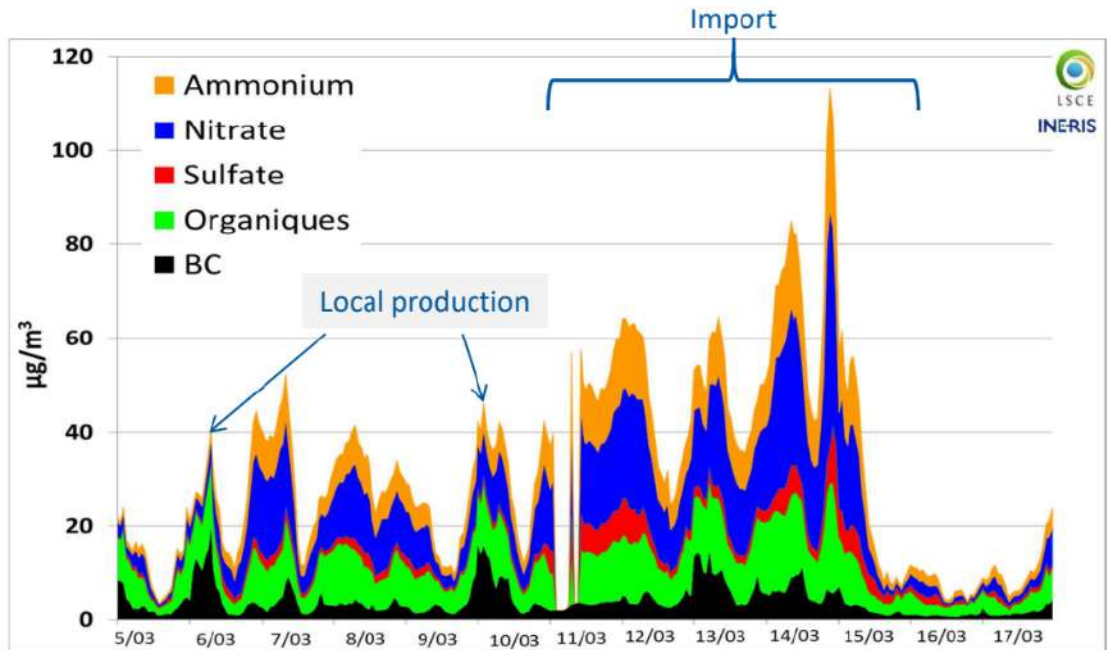




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An episode that begins with local production and is enriched by imported air masses.



### Air quality and public health studies

1. **Impact assessment of the Low Emission Zone (LEZ)** - Elizabeth Fu, Air quality engineer

Presentation : [20230417 Presentation ZFE Délégation Georgie.pdf](#)

A LEZ is a chosen geographical zone in which certain vehicles are restricted from circulating in the zone. In France, the classification of vehicles is based on the « Crit'Air » classes. They are based on EURO norms of emissions of pollutants. The restriction can be different depending on the day and time (weekday/weekend, day/night) and on the type of vehicle (personal-use vs professional use). The restriction in a LEZ can be progressive in time and in zone.

AirParif has made the pre-evaluation of LEZ in Paris with determining indicators such as exposed population, km of road exposed, exposed schools, hospitals and sports facilities.

2. **Scenario "WHO guidelines trajectory"** - Fabrice Joly, Head of Analytical Department; Noémie Pauchont, Air quality engineer

Presentation : [Présentation\\_traj\\_scenarisation\\_Airparif\\_20230425\\_Géorgie.pdf](#)

AirParif has conducted a statistical model to estimate the necessary reduction of emissions in order to reach different thresholds (including new WHO guidelines), based on the 2018 emissions of Ile-de-France (inventory of emission). It allows forecasters to play with 8 different sectors (Residential, tertiary, Road Traffic, airports, other transports, industry, agriculture, construction sites) and identify the policies and targets to reach by sector to reduce emissions.

For instance, in order to reach a Limit Value of annual mean PM10 of 20µ/m<sup>3</sup> for the whole Ile-de-France Region, it would require a drop of road traffic emission by 100% and 60% in all other sectors.



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Necessary reduction of emission in order to respect the limit value and to meet with WHO guidelines (compared to 2018 emissions)

PA11

PM<sub>10</sub>

VL : 40 µg/m<sup>3</sup>

VL (2030)\* : 20 µg/m<sup>3</sup>

OMS : 15 µg/m<sup>3</sup>



Paris



MGP hors Paris



IDF hors MGP

Very locally exposed to exceeding concentration

Limit value exceeded** (including with -100%)	- 80 %
Limit value exceeded** (including with -100%)	- 80 %
- 100 %	- 60 %

The concentration in IDF without regional emission are at the WHO threshold level (+/- 1 µg/m<sup>3</sup>) :  
Reducing regional emission allows to limit the exposition of its inhabitants to PM<sub>10</sub> concentration but not enough to meet the WHO guidelines

\*VL 2030 - limit value in the new European guidelines

\*\*threshold exceeded : at least more than 1000 people are exposed to such concentration

The conclusions of the study where the following for the Paris and Ile-de-France region:

- NO<sub>2</sub> : The actual Limit Value will not be respected in 2025 without additional efforts. It is supposed to be respected in 2030. In order to respect the new Limit Value 2030\* important additional efforts will be required, on the road traffic sectors and the others also. In order to respect the WHO guidelines important additional efforts will be required on all sectors.
- PM<sub>10</sub> and PM<sub>2.5</sub> : In order to respect the new Limit Value 2030\* important additional efforts will be required on all sectors. .In order to respect the WHO guidelines important additional efforts will be required on all sectors at a regional and extra regional level.

18h00 : Visit to an air pollution monitoring station (Les Halles), the most complete air monitoring station in the Ile-de-France region.



Wednesday 26th April 2023

09h30-10h : Welcome Coffee - Presentation EF by Frédéric Sansier, Deputy Director of Expertise France

**French National Environmental Health Action Plan 4 (2021 - 2025) : governance, structure and their monitoring and evaluation**

**1. Présentation\_PNSE4\_EN\_vf.pptx**

After an overview of the international agenda in environmental health and an assessment of previous NEHAPs, Philippe Bodenez, from the Ministry of Environment and Sébastien Lesterle from the Ministry of Health introduced the NEHAP 4 and its governing principles. One of the main principles is that NEHAPs have to be translated into regional actions plans from the 3rd phase, giving more actions and leverage to the territorial level (some basic principles and actions are national and have to be part of



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the regional plans). The goal is to increase the territoriality/localisation of the plan and its implementation and monitoring.



- **Environmental Assessment in France (General Direction for Risk Prevention - Ministry of Environment)**

**P 2. Présentation eval impacts sanitaires\_rencontre géorg...**

Philippe Bodenez and Agnès Lefranc from the Directorate General of the Risk Prevention of the Ministry of Environment introduced the methodology for Environmental Assessment, with a 4-step approach : Assessment of the facility's emissions, Assessment of receptors and exposure pathways, Interpretation of the State of the Environment (IEM –

Interprétation de l'état des milieux), Prospective Health Risk Assessment (ERS – Evaluation des risques sanitaires). One particular interest of participants was on the local specific approach : « étude de zone » (zone study).

Which area study is an evaluation process of: i) the impacts of human activities on the state of the environment ; ii) the inherent health risks for the populations. This study is conducted on a territory called "area" to identify and prioritize actions to manage and control these risks or impacts. It :

- Takes into account the cumulative impact of emissions from all human activities
- Proposes adapted monitoring and/or management methods
- Consultation with the various stakeholders in the area
- Based on the State of the Environment approach

The guide for conducting a "Zone study" is made by INERIS and available in English here :

[drc-guide-etude-zone-v5final101111-1321430999 en-GB.pdf](#)

- **"Green data for Health" initiative (under the French NEHAP 4, Activity 18- Marie RAMON-DARE (Project Leader, Ministry of Environment)**

**P 3. 202304\_Georgie\_CGDD\_GD4H English version\_VF.pptx**

The Green Data for Health (GD4H) initiative, led by the Innovation Lab (Ecolab) of the French ministry of ecology comes from a public policy framework entitled (4° plan National Santé-Environnement). The GD4H aims to create a solution to help experts and researchers to better locate, analyze and cross environmental and health data. By doing so, the GD4H contributes to the production of knowledge on the impact of environmental factors on health. An investigation, led for several months with the stakeholders, producers and users of environmental data, allowed us to define the following components defining the service offer:

- An **online catalog pointing towards 130 environmental datasets** described for a use in the health-environment domain. This catalog aims at improving the findability and accessibility to data. Reflexions have also been carried out on the data schema to meet interoperability challenges.
- **Legal tools** to allow data producers and users identify the legal regime which can be applied to the opening, sharing and access to environmental data, especially in a context of research.
- **The animation of the health-environment data community**, which aims at enhancing the quality and reuse of environmental data, through actions such as plenary sessions of the community, joint call for projects with the Health Data Hub "Data for research and innovation in health-environment", data challenge to identify solutions to improve the quality of environmental datasets etc.

**Regional Health Agency of Ile de France - Case-by-case procedure for screening**

Dr. Dany Saba, Sanitary Engineer



**P 4. Case by case procedure ARS-IDF en-GB.pptx**

- Health in Environmental Assessment : tools at local level and coordination with planning and environmental authorities
- Focus on air pollution in Health in Environmental Impact Assessment and examples with local projects in the Paris area
- Presentation of the GIS tools for sanitary and health statements







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Dany Saba introduced the work of the Regional Health Agency in Environmental Assessment and their tools for decision-making. She introduced the CERFA application for both environmental and health authorities in France, filled by the planning authority in order to give details about an upcoming plan/project/programme (screening application). The application has been translated to English [W T\\_1-Tool\\_Application PA.docx](#) and an equivalent has been translated to georgian. It would be an screening/automatic scoping application [W GEO - T\\_1-Tool\\_Application PA.docx](#)



Using a case-example, Dany Saba has then used the tools at her disposal for the screening decision regarding environmental assessment and the involvement of the Regional Health Agency in the decision-making process : selection grid, decision-tree and GIS-based information for checking the area of the proposed plan and programme.

Thursday  
27th April  
2023

**French School of Public Health - EH department -  
EHESP/ LERES Environmental Health Lab**

- **Meeting with Dr. Isabelle Richard (EHESP Director) and International Relations Department**

The meeting emphasized the role of EHESP in the certification of sanitary engineers and their evolving roles with the challenges of climate change and chemicals.

The Director insisted on the link between research, health authorities and decision-makers in order to improve scientific evidence and evidence-based decisions. In the field of environmental health, research is crucial especially for the



dose-response relationship response and the exposure of the population. Efficient and regular studies like human biomonitoring are essential.

The training plan for the NCDC and its partners will address the main challenges for HIA and quantification in HIA : guidelines and process, quantitative impact assessment methodologies, health data, SIG for HIA and laboratory capacities to improve the heavy-metals laboratory of the NCDC.

The Director was pleased to see that many participants have also a role in academia in

Georgia (Tbilisi State University, Tbilisi Medical University, Ilia University), and opportunities for bilateral university and research cooperation were mentioned using the existing french-georgian university cooperation programs.

- **Review of content of first training modules with NCDC and MEPA/NEA, SUDA and Tbilisi City Hall**

The training (30/05 to 09/06) will be based on the workshops, case studies and documents elaborated and consulted (i.e. the HIA practical guidelines) during the missions to Georgia as well as on one or more examples in France.



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The aim is for participants to be able to intervene appropriately and efficiently (with the right tools and the right people) in environmental approval procedures according to the Georgian law, the guidelines developed and according to its positioning (NCDC, MEPA/NEA and Planning authority/Municipality).

Alternating lectures, group work on case studies and field visits with specific environmental risks (soil pollution in one district in Rennes ; agricultural emissions in one bay and its development plan).

Specific tools presented by the guidelines will be tested and fine-tuned by the participants : local health diagnosis, exploratory walk with a "health" lens, ...

**France Exposome - Vincent Bessonau [Accueil | France Exposome \(france-exposome.org\)](#)**

The new research infrastructure France Exposome aims to structure and to gather scientists working on the human chemical exposome, in the environmental-health field, via targeted and non-targeted characterisation (mainly involving mass spectrometry) of exposure biomarkers, toxicokinetic modelling and predictive toxicology. France Exposome offers innovative methods and tools to support research aiming to better understand the links between exposure to chemicals and adverse health outcomes.

France Exposome offers expertise and scientific services (methodology, technics) for expology, epidemiology, public health and private research teams. National agencies (Santé publique France, ANSES) and institutes (INCa) may also use France Exposome to develop their biomonitoring and prevention programs.

**Visit of the Environmental Health Laboratory - LERES - Vincent Bessonau**



Friday  
28th April  
2023

**Regional Health Agency of Brittany - Rennes**

*Presentations*

- 📄 230428\_Géorgiens\_Présentations\_ARS en-GB.pdf
- Anne-Briac BILI - Cabinet Director



**Presentation of the Breton SE regional plan and its assessment of the PRSE 3 (2017-2021)** Anne SERRE, Head of Environmental Health Departement

**Principles** : Comprehensive and positive approach to health, no sovereign actions, territorialisation of the plan, scalable (through annual calls for projects), visible (labeling of actions, communication issues).

**Key lessons and success factors from the assessment made** : objective diagnosis before the implementation of the plan, tripartite governance of the plan with health and environmental authority, success of the localization of actions, increased financing (almost 4M Euros, mostly financed by the ARS), active communication and promotion (website, webinars, training, ...).



**Key tools and documents :**

- Dashboard for main indicators of the Regional Plan : 📄 tbse\_2021 en-GB.pdf
- Survey on environmental health risks on the Brittany people : 📄 oeb\_memento\_chiffres\_cles\_2022-2 en-GB.pdf



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- Guide for environmental health profiles : 20170615-guide-DSLE (1) en-GB.pdf

**The PNSE 4 and the draft PRSE 4 (2022-2027) : elaboration of the regional plan**

Anne SERRE, Head of Environmental Health Department

The construction of the PRSE4 started in 2021 and is still in progress:

- Preparatory elements : Evaluation of PRSE3 and the Health and Environment Barometer
- a concerted development process with the regional environmental health community (workshops);
- more detailed consultation phases (ex Copil-PRSE, State services and agencies) and a seminar
- consultation phases (till november 2023) : Regional Health and Autonomy Conference, Regional Economic, Social and Environmental Council, Breton High Climate Council

The "One Health" approach is a key ambition of the PNSE and the Breton PRSE. The key issues are to truly integrate the three dimensions of human, animal and environmental health into decisions, research and practice ; turning innovative and ambitious concepts into policies; supporting competent and mobilized cross-sectoral collectives at local level, while overcoming conflicts of interest and use.

**Focus on air quality / Béatrice GAUTIER-GRALL - Regional Pilot Outdoor**

Concrete involvement of the Regional Health Agency on air quality protection plan : Action 11: Establish a doctrine for events organized during pollution periods and adapt the prefectural pollution episode management system

Objective: To define in advance of their application, the measures to be taken during a pollution episode, depending on the public involved (children, adults, people vulnerable to air quality), with regard to two categories of events: events potentially generating additional pollution to the current episode ; eEvents where participants may be exposed to a health risk (mainly sports)

The delegation was also very interested in the local energy, air and climate plans for which the Regional Health Agency is consulted and give its opinion in the framework of HIA.

**Brittany Mission of the Environmental Authority**

Pascal Mallard, Deputy Head of the Environmental Assessment Division,  
Damien Dambre, Officer for air quality, energy, agriculture and industry sectors,  
Sylvie Vincent, Pollution and risk prevention department, Chronic risks Division, Inspector



Presentation : 20230428georgielCPEsv2 en-GB (1).pdf

The Environmental Authority gives its opinion on the projects, plans and programmes. It steers and checks the EIA/SEA documentation and is part of the monitoring of environmental and human health risks indicators.

The impact assessment includes a qualitative or quantitative health risk assessment depending on the issues at stake. National guides present the recognised methods. If another method is used, the principle is to ask for a third party expert study at the petitioner's expense. The ARS (Agence Régionale de la Santé) is consulted and its opinion taken into account.



For classified projects and in accordance with the Industrial Emission Directive as well as the SEVESO Directive on chemicals, ministerial decrees or the prefectural decree impose

- emission limit values for aqueous or atmospheric discharges, legionella, noise, odours
- of environmental monitoring by issue
- the frequency of monitoring and transmission of results (remote reporting)
- sampling and measurement standards

**Healthy Cities Network in France - World Health Organization**

Maude Luherne, Director

Maude Luherne introduced the meeting by presenting the Healthy City Network of France, its creation and it's purposes. Dissemination





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of tools and good practices between cities in France around different health thematic : environmental health and urban health, healthcare, health inequalities.

Different indicators used by the Healthy Cities Network have been presented, and can be used as a baseline for the elaboration of local profiles of municipalities.

Two specific tools used by municipalities and disseminated by the network have been presented :

- the Cityplace, allowing for elaborating a local health diagnosis, and
- Health economic assessment tool (HEAT) for cycling and walking, developed by the WHO



Maude Luherne will take part in the training at the EHESP at the end of May. And since Tbilisi Municipality is also a WHO Healthy City (Phase VII), it was decided to put in touch the representative of the Transport and Urban Development Agency of Tbilisi City Hall (participating in the training) for further collaboration.

Saturday  
29th April  
2023

**Saint-Malo "Atmosphere protection plan and HIA"**

*Benoit Bertiaux (Directorate for Ecological transition, territorial development and major projects) with Alain Le Tertre and Anne-Roué Le Gall*

- **Discussion on the new Atmosphere Protection Plan : elaboration, consultation with local stakeholders and monitoring of its implementation**

A study carried out by Air Breizh, the air quality observatory in Brittany, and published in early June 2022, warns about high nitrogen dioxide emissions and exposure to fine particles in Saint-Malo (with one measuring station in Rocabey Cemetery). According to the organization, the average PM levels of Saint-Malo are higher than those of other Breton agglomerations. In question: sea salts, heating, industry, agriculture or port activity. The local population and media were pointing to the risks related to the air quality, pushing for a research by health authority for more evidence of the risks.

- **Quantitative HIA in Saint Malo -**  
Alain Le Tertre, Air Pollution epidemiologist, Santé Publique France  
*Presentation : EQIS\_Saint Malo\_2023\_04\_29.pptx*

Saint-Malo has been Identified by the Regional Health Area with air pollution (PM10) greater than even Rennes, and the air quality impact questioned by the local population and especially the potential source would be a fertilizer factory (dust, odor nuisance).

Main results with AirQ+ for the year 2021 :

- Burden of disease : total mortality (30 yrs+) PM2.5 : 5.6 % with a confidence interval of [2,0 % ; 8.8 %]
- attributable fraction of deaths: 38 deaths attributable with a confidence interval of [13 ; 59]

The QHIA was useful for the communication to local authorities and stakeholders, and their own communication to answer the concerns of the population. However, it does not deal with the fertilizer factory question and this question needs further investigation by the environmental authority.

- **Visit to the air pollution monitoring stations Rocabey in Saint-Malo and their positions : Air Breizh**



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