

WEED CONTROL ON TRACKS

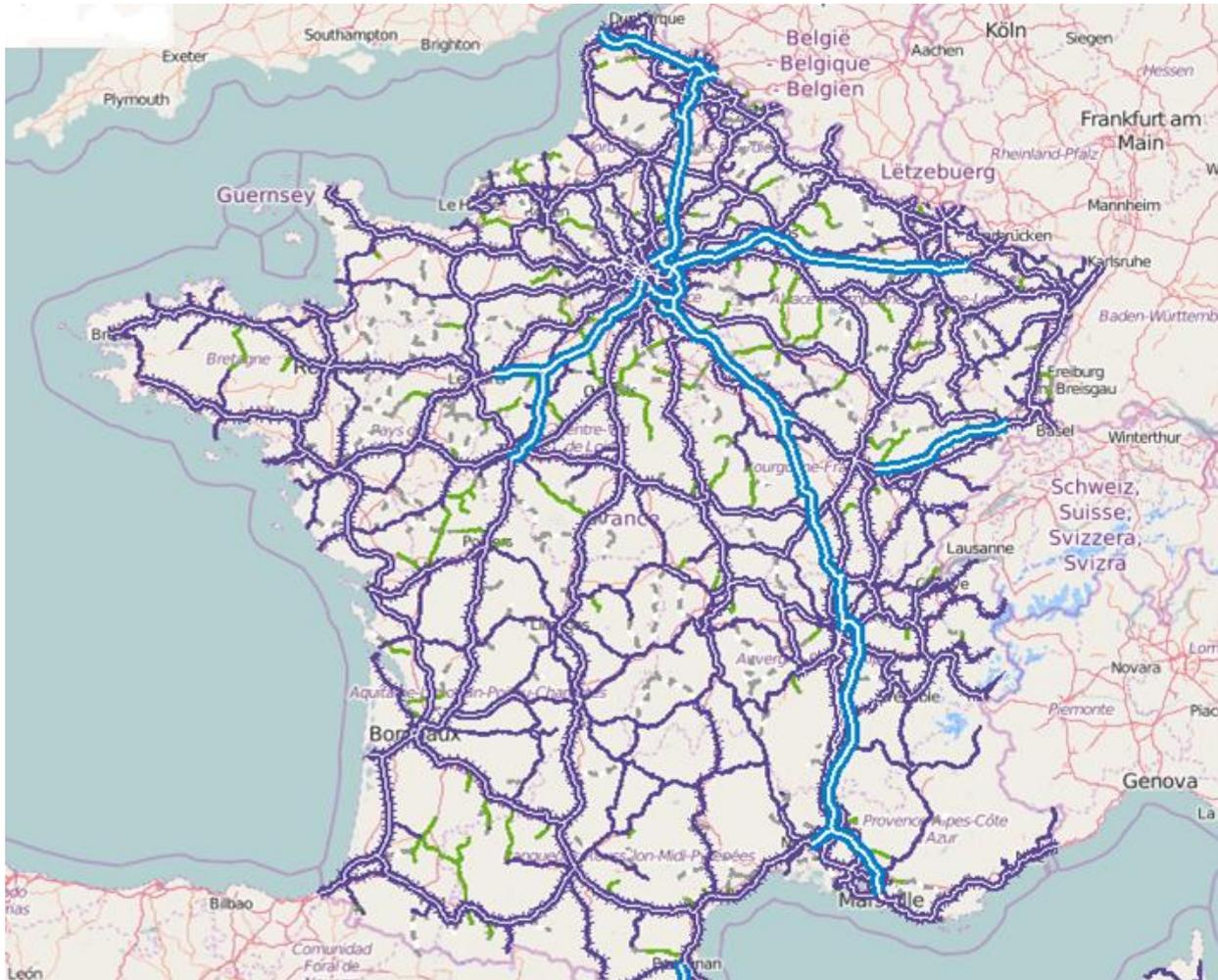
UIC INTERNATIONAL WORKSHOP : WHAT FUTURE FOR HERBICIDES?

SNCF RÉSEAU

ROMAIN ROBERT
24-25 MAY 2016

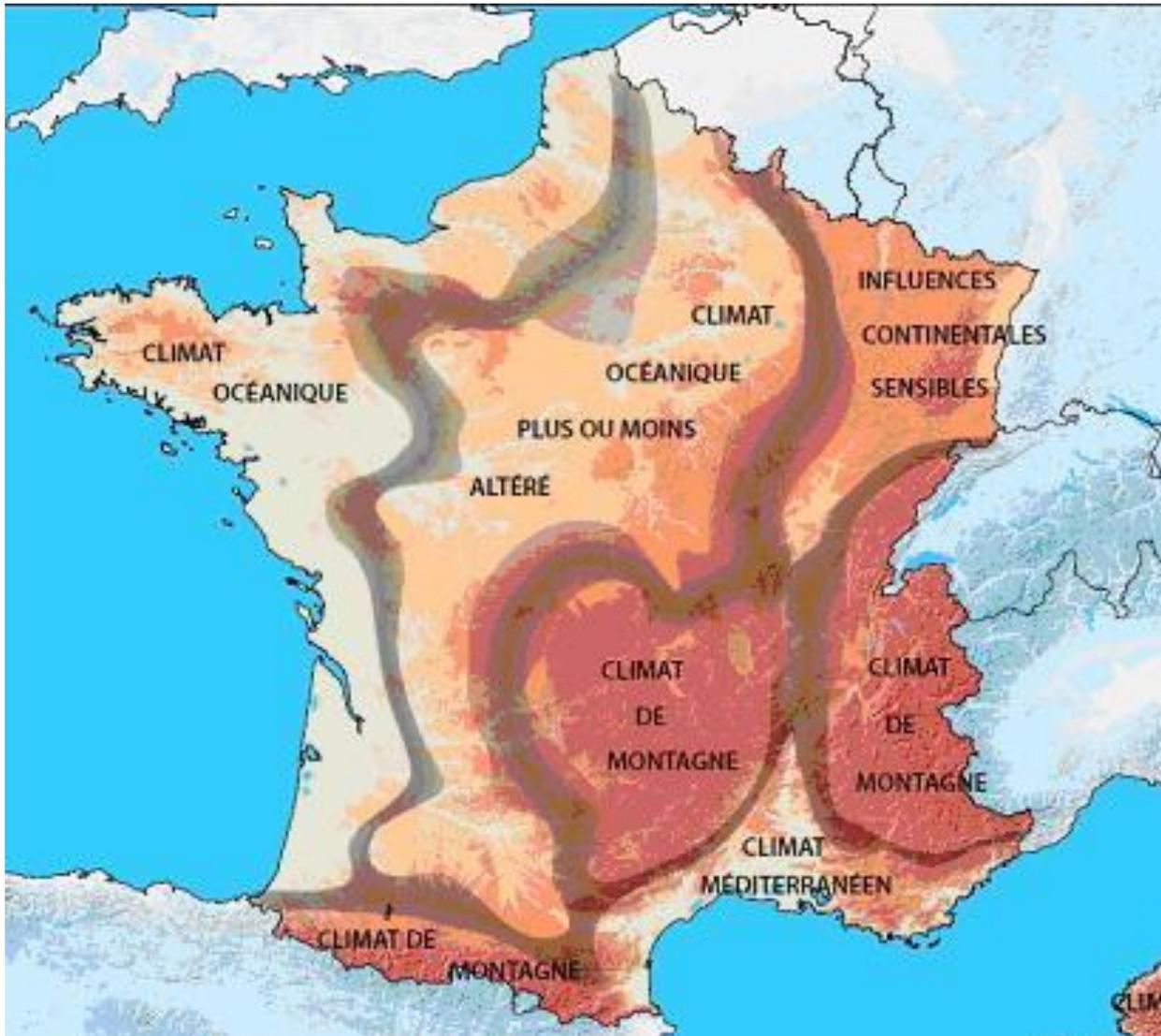


GENERAL SITUATION



- + 30,000 km of lines
- + 50,000 km main track
- + 12,000 km of service track
- + 95,000 ha to maintain

GENERAL SITUATION



+ **5 types of climate**

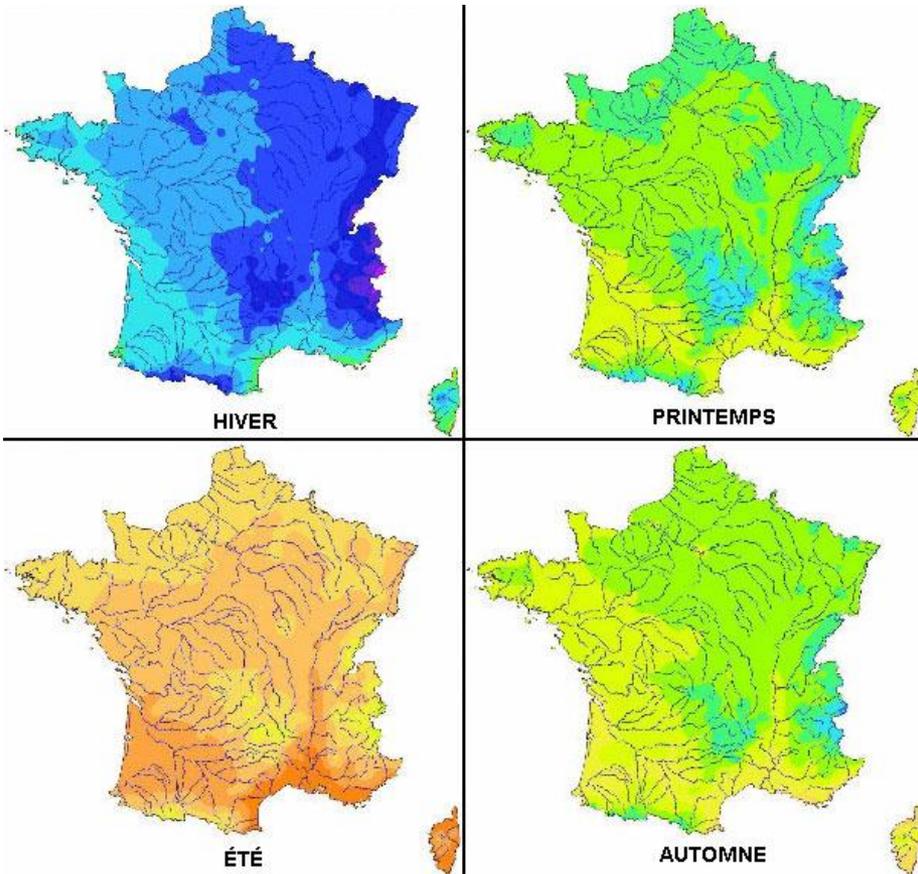
- Mountain
- Mediterranean
- Ocean
- Semi-continental
- Semi-ocean

GENERAL SITUATION

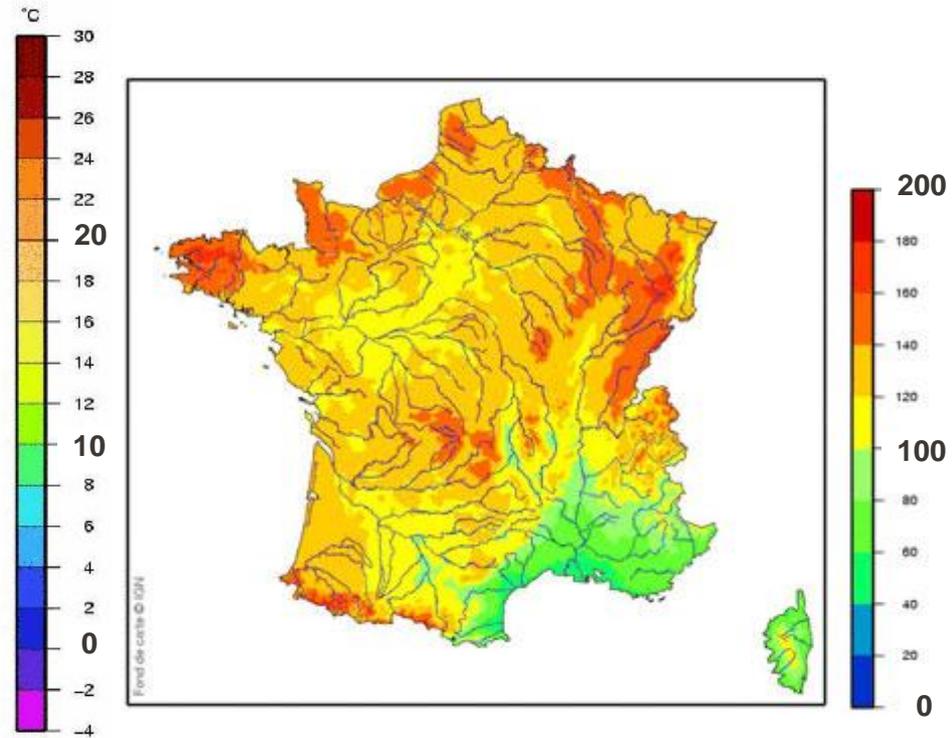
Temperatures and precipitation very variable...

... involving wide diversity of vegetation...

...and therefore severe technical constraints.



Average seasonal temperatures (1981-2010)

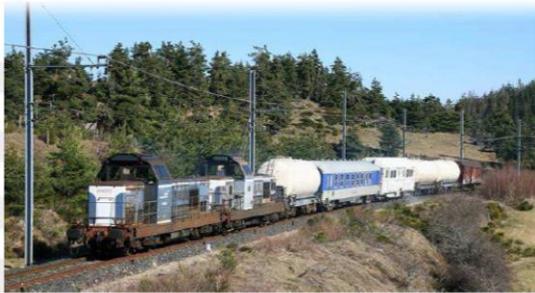


Annual average number of days with precipitation above 1 mm

RESOURCES

Chemical treatment of tracks and pathways : €18M per year

- Own resources: 6 national vegetation-clearing trains, 25 local trains, 22 trucks



National trains

- + Main lines
- + Direct injection
- + Up to 70 km/h
- + No handling of products
- + Pump for additive
- + Traceability
- + Currently being fitted with GPS

Regional trains

- + Branch lines
- + Direct injection
- + Up to 30 km/h
- + No handling of products
- + Traceability
- + Fitted with GPS

Trucks

- + Direct injection
- + Up to 5-6 km/h
- + No handling of products
- + Traceability
- + Fitted with GPS

RESOURCES

Products

- A single curative, total, systemic compound: **glyphosate**
- 3 types de products depending on the season: preventive / mixed / curative
- No alternation possible with glyphosate: further treatment possible with selective products in cases of difficulty
- Rotation of train scheduling

SNCF - TOTAL HERBICIDE PURCHASES 2015 <i>(active components purchased in kg)</i>	
Selective herbicides with glyphosate (or aminotriazole) formula	
2,4-D (DT)	1,120
2,4-MCPA	5,821
DICHLORPROP-P (DT)	3,347
Total preventive herbicides	
OXYFLUORFEN	7,379
PENDIMETHALIN	4,305
DFF	2,047
FLAZASULFURON	144
Total curative systemic herbicides	
GLYPHOSATE	36,112
AMINOTRIAZOLE*	29,917
TOTAL	90,192

*Aminotriazole : final year of use, active component banned from 1 January 2016.

REGULATIONS

Protection of water

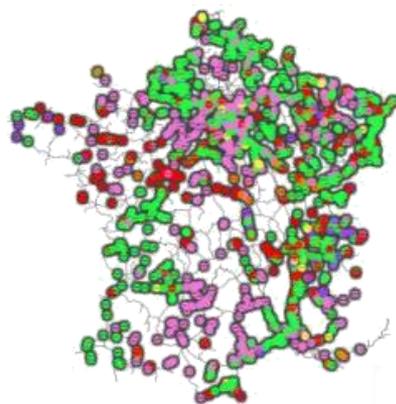
- Water course: No-treatment zone.



471 km

of rail network (line) are affected by the No-Treatment Zone (NTZ) regulations

- Area for groundwater resources

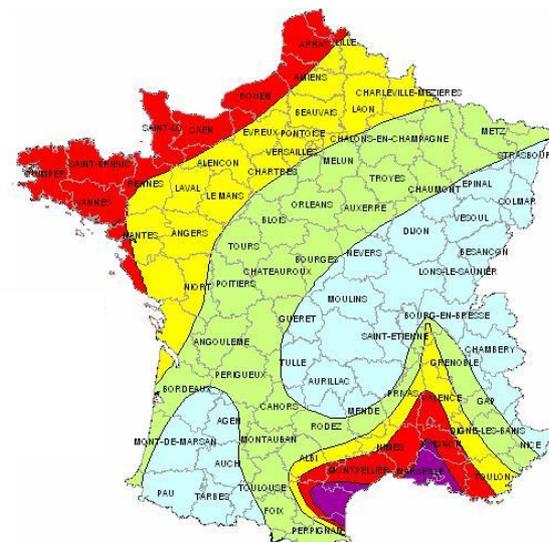


394 km

Abstraction of drinking water treatment forbidden (+10% in 2015)

Rural Code

- Operator and Decision-maker Certificates (5 years)
- Authorised products: for railway use
- Wind <19 km/h
- No rain or no rain forecast immediately after treatment
- Compliant storage
- No-access period
- Personal Protective Equipment
- Protection for sensitive sites



Average wind speed in France (km/h)



REGULATIONS

DEVELOPMENTS

Use of des pesticides in Non-Agricultural Zones: planned collapse of market

Unfavourable development of regulation:

- **Public bodies: ban** in January 2017 on use pesticide products (except for products of biological control, AB low-risk products) for control of vegetation in green spaces, forests, roads or areas open to or accessible by the public for recreational purposes.

➡ **SNCF Réseau exempt.**

- Private use: open sale banned from January 2017 – ban on use from January 2019.

Chemicals for which substitution is planned (regulations 1107-2009)

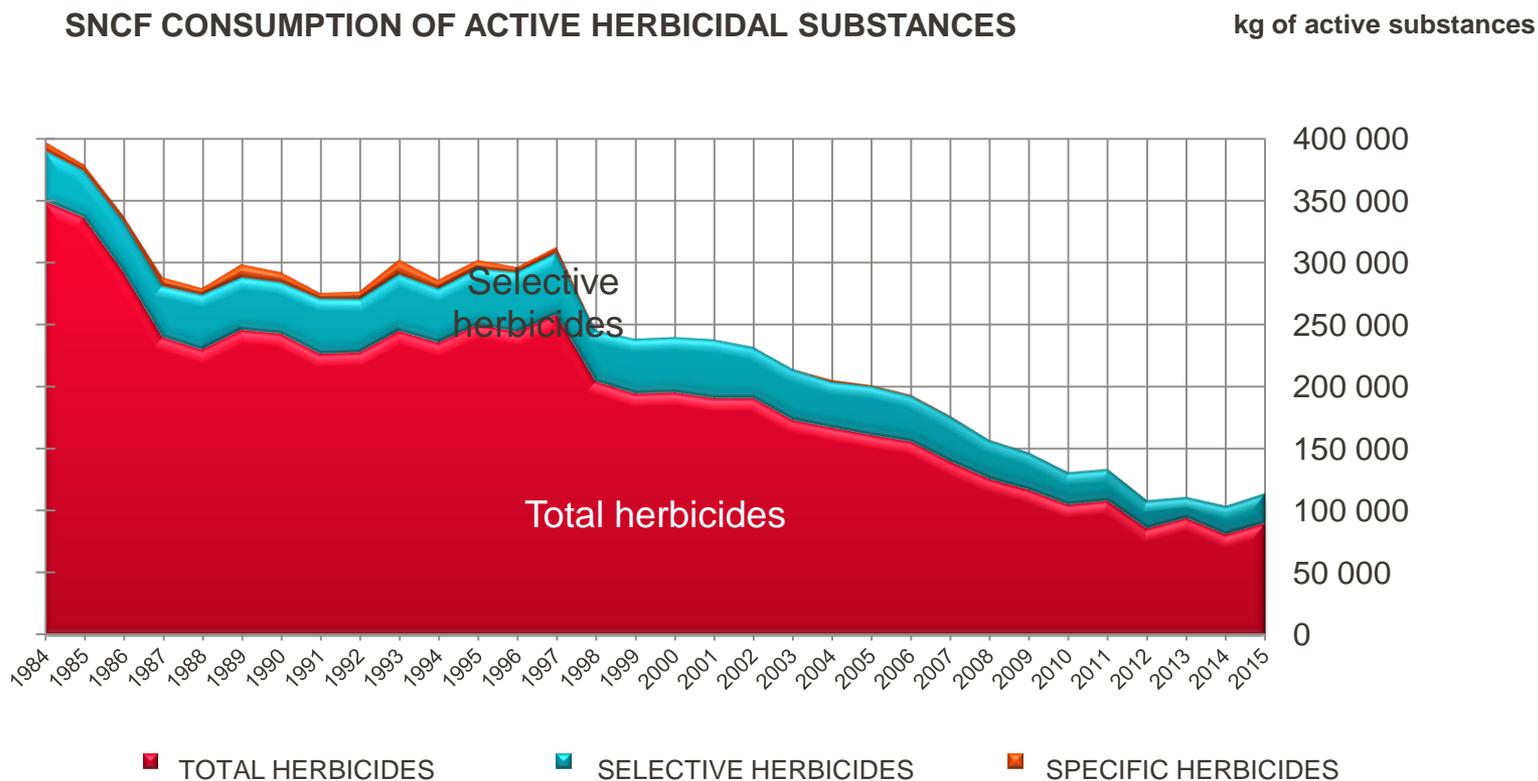
- Regulation 2015-408 : 3 chemicals which are present in **3 products used by SNCF Réseau.**
- Comparative evaluation: substitution by other products or by non-chemical methods does not present any **major economic or practical difficulties.**

OUTLOOK

- **Reduction of consumption**
 - choice of products (less active ingredient, adaptation of dosage following rail trials)
 - modernisation of equipment.
- **Operator training**
 - internal training (environmental protection, health, use of equipment and herbicides) in addition to Certiphyto: **1270 hours** over two years.
- **In the company approval process**: application as a service delivery guaranteeing professionalism.
- **Partnership agreement signed with ministries** (2007 with renewal in 2013) under Ecophyto.

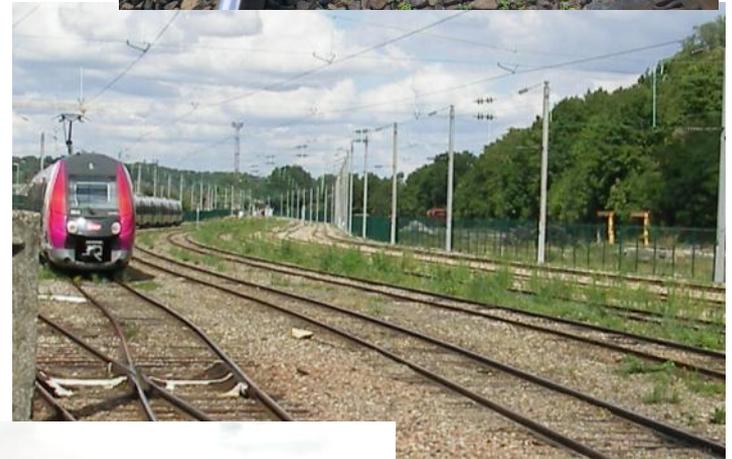
OUTLOOK

Over 30 years SNCF has cut its consumption by 75% (400T to 100T)



OUTLOOK

BUT...



THANK YOU FOR YOUR ATTENTION