

# WEED CONTROL ON TRACKS

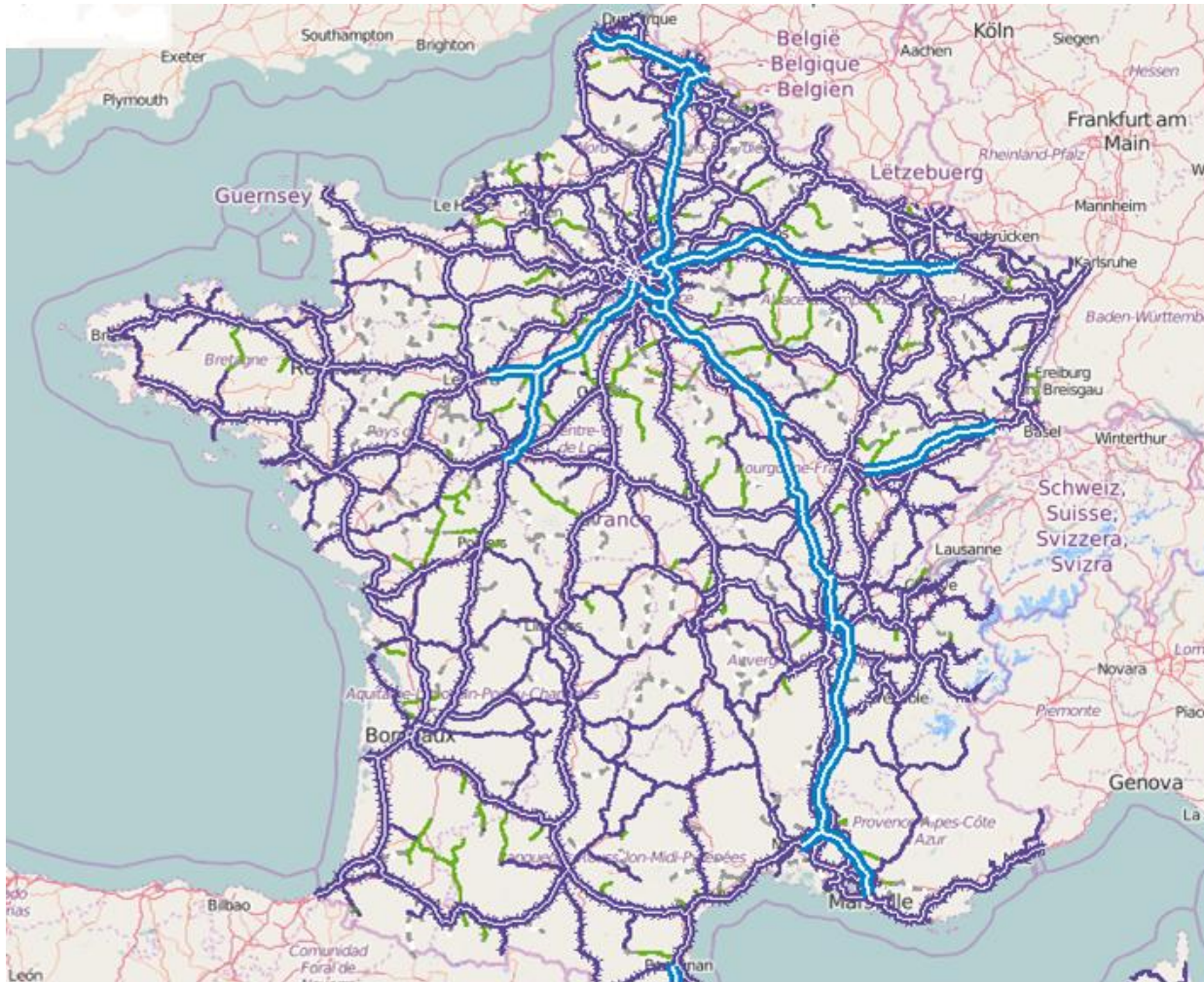
UIC INTERNATIONAL WORKSHOP : WHAT FUTURE FOR HERBICIDES?

**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

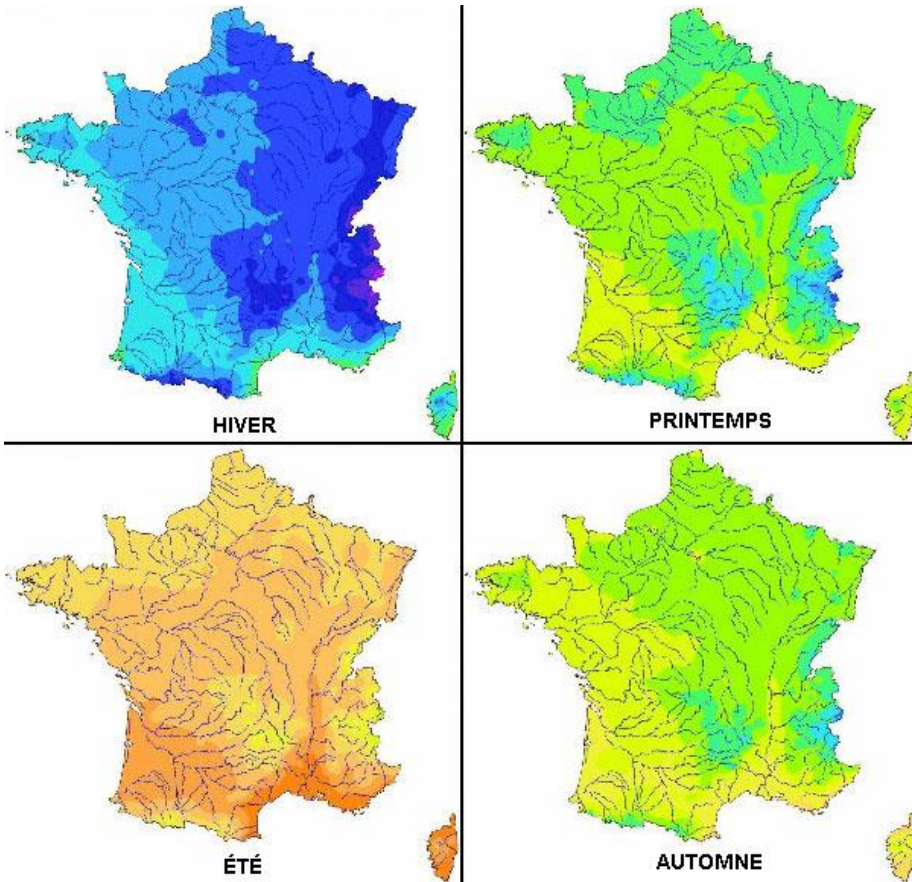


# GENERAL SITUATION

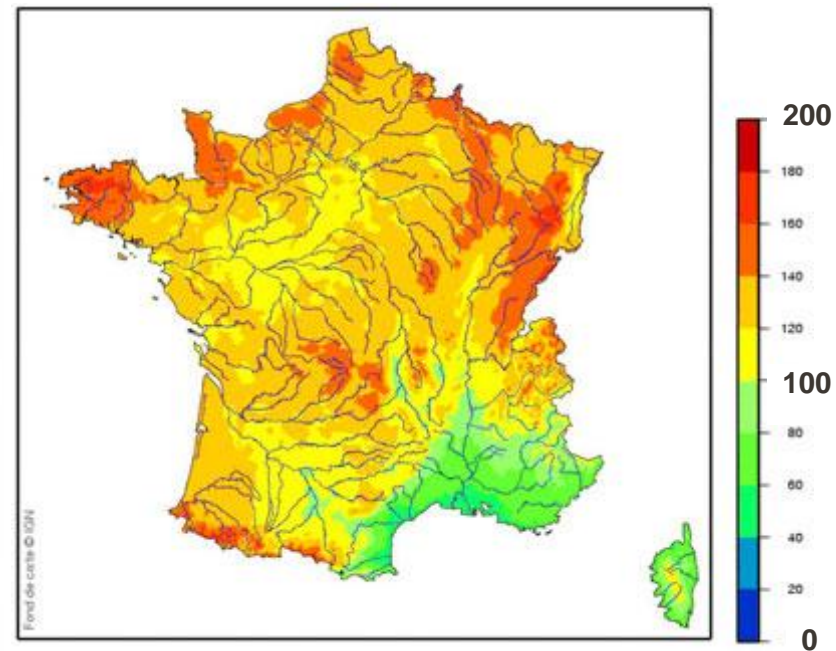
Temperatures and precipitation very variable...

... 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

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

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

# REGULATIONS

## Protection of water

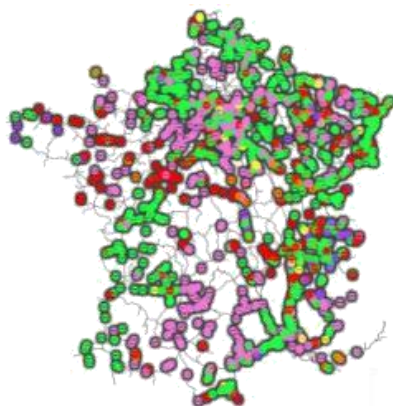
- Water course:  
No-treatment  
zone.



471 km

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

- Area for  
groundwater  
ressources

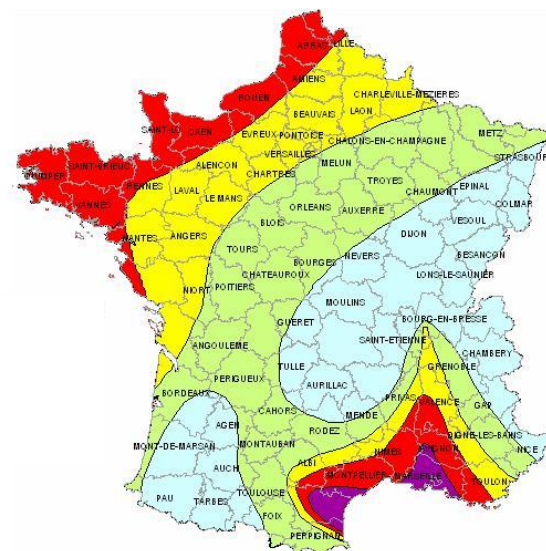


394 km

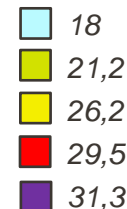
Abstraction of  
drinking water  
treatment  
forbidden (+10% in  
2015)

## 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**

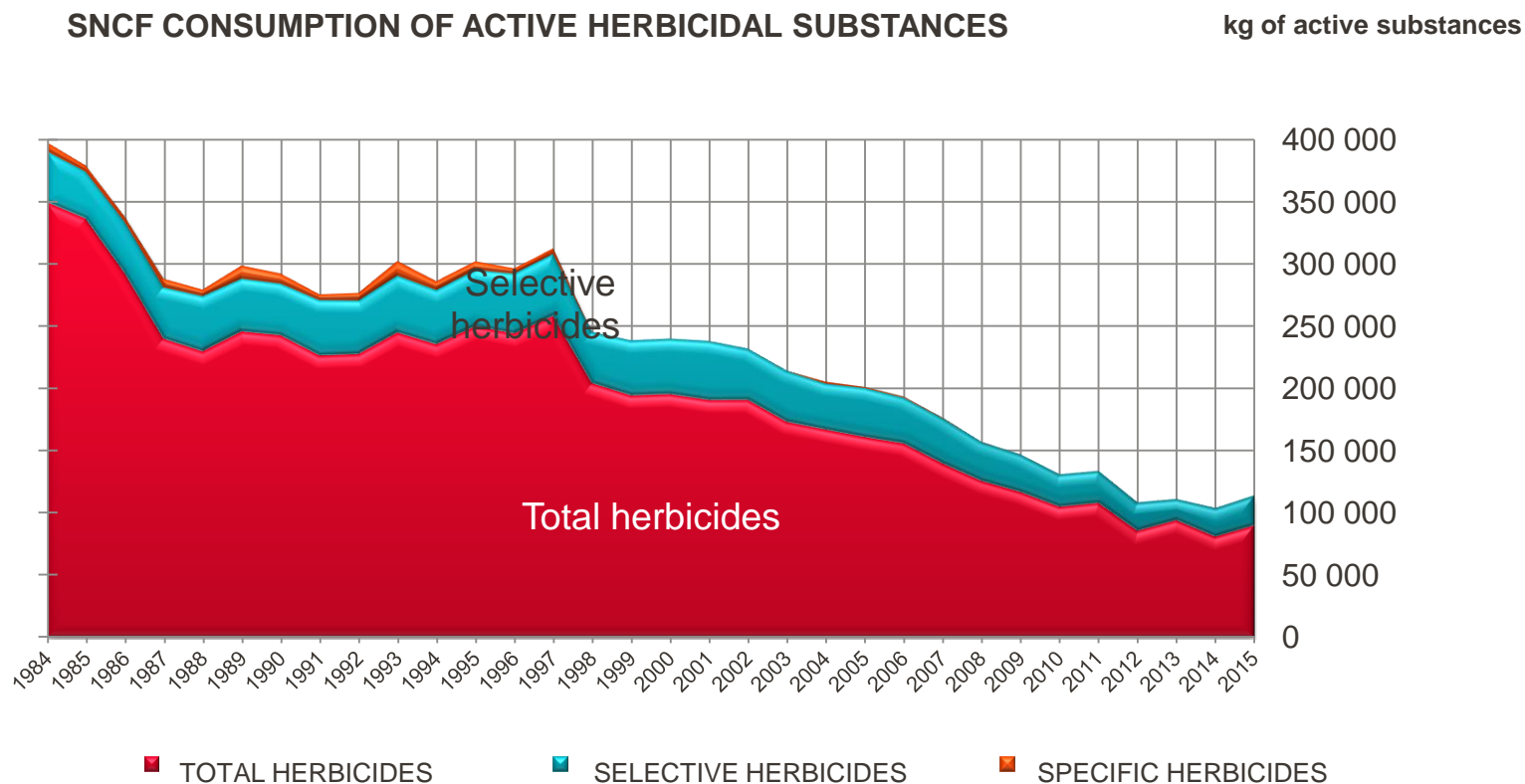
- internal training (environmental protection, health, use of equipment and herbicides) in addition to Certiphyto: **1270 hours** over two years.

- **In the company approval process:** application as a service delivery guaranteeing professionalism.

- **Partnership agreement signed with ministries** (2007 with renewal in 2013) under Ecophyto.

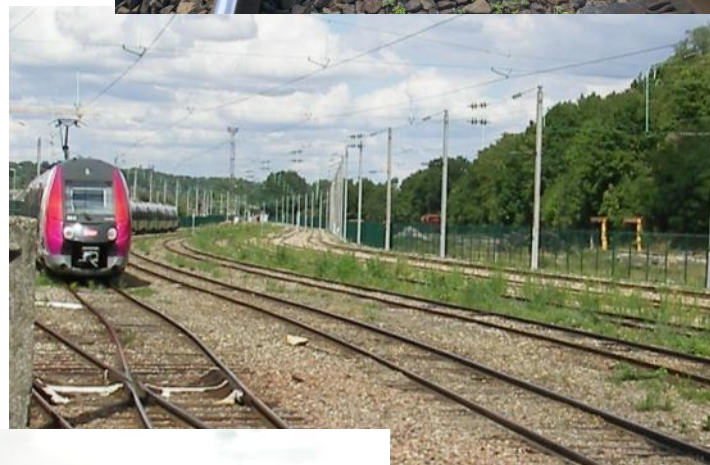
# OUTLOOK

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



# OUTLOOK

BUT...



THANK YOU FOR YOUR ATTENTION