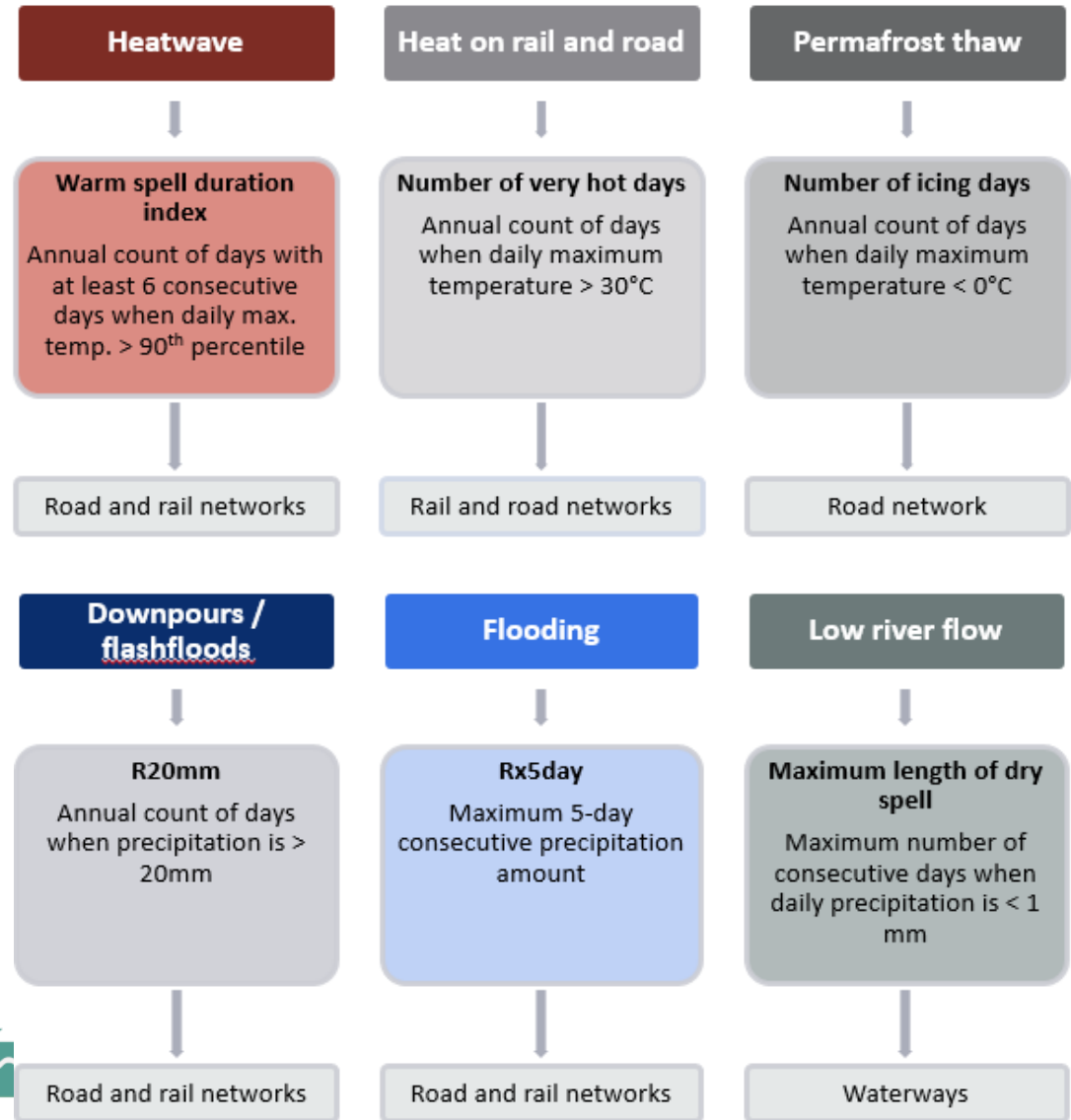
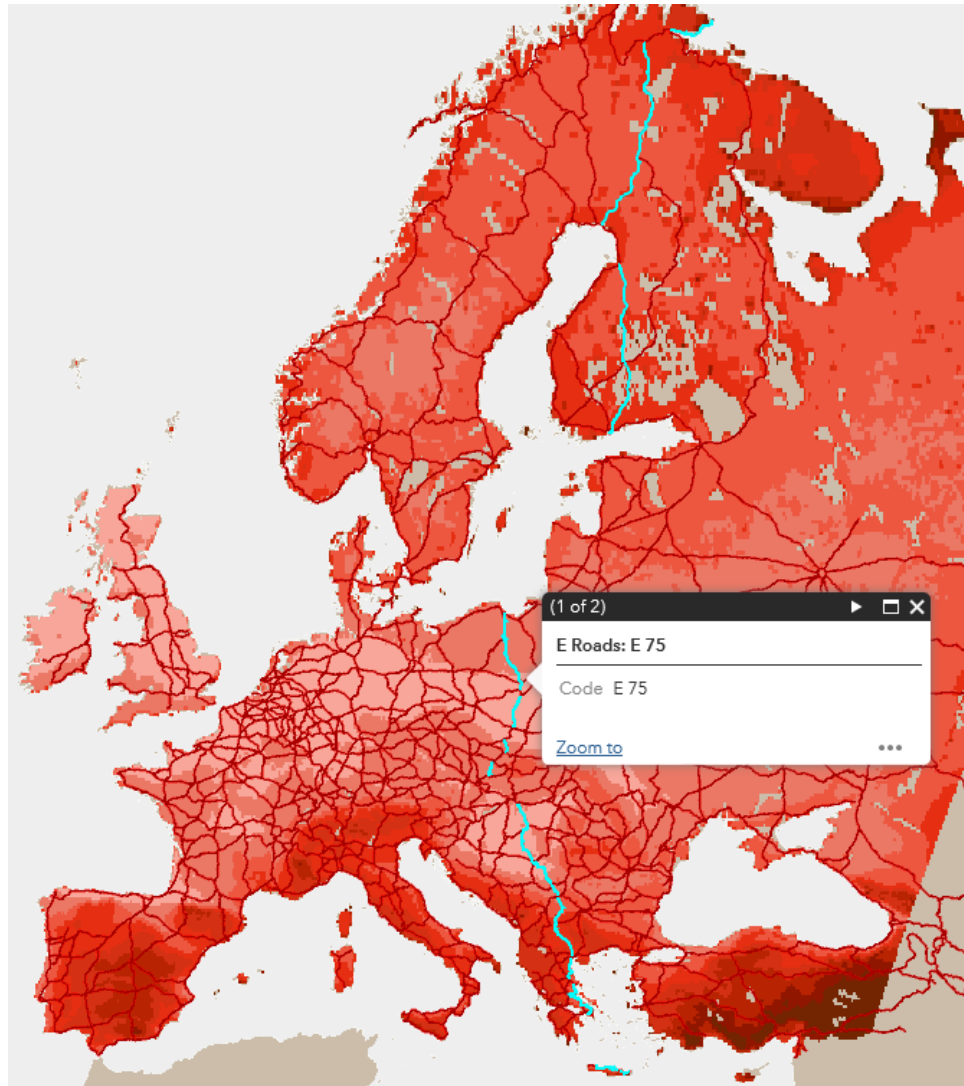


Climate Change Impacts and Adaptation for Transport Networks and Nodes

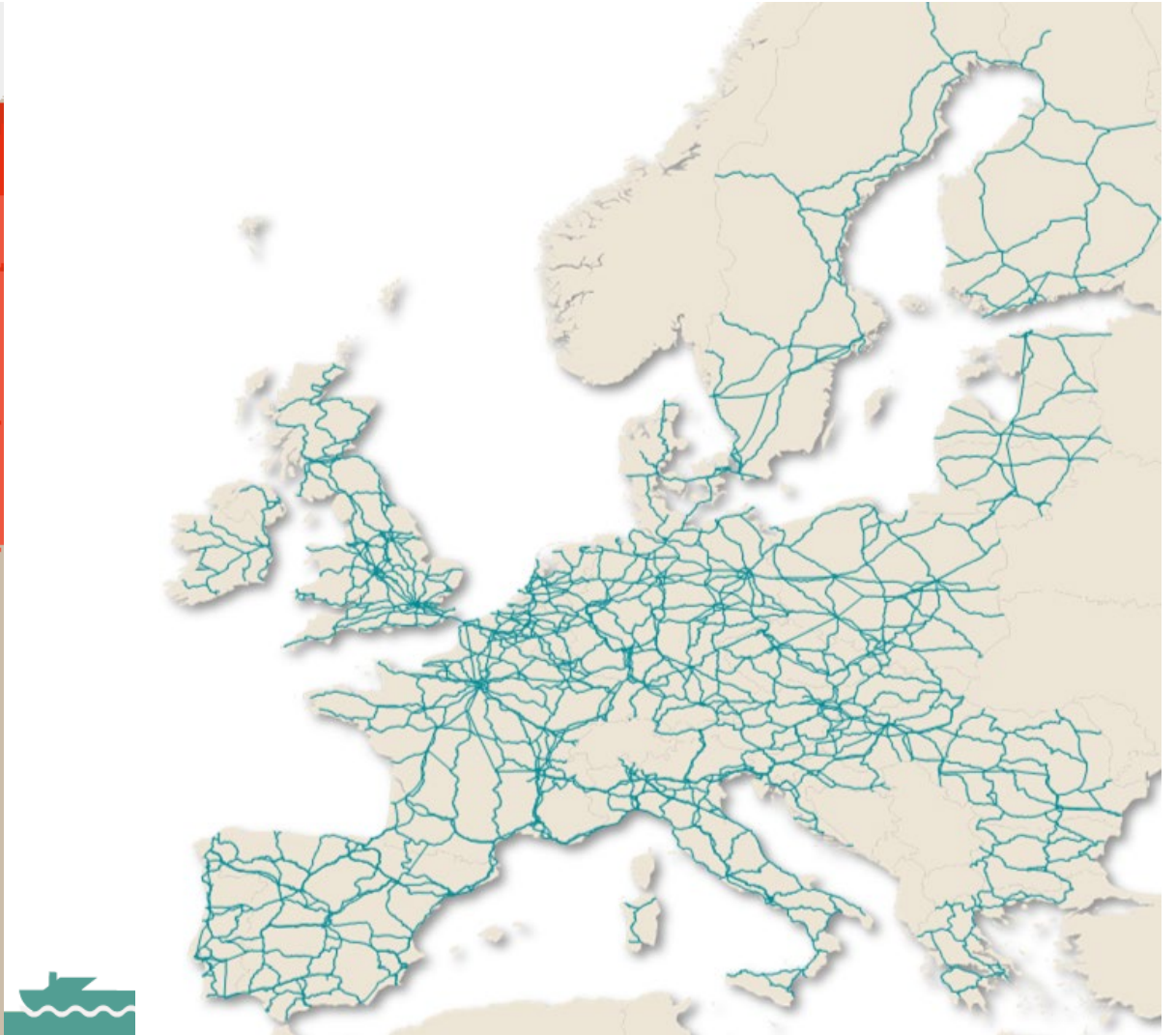
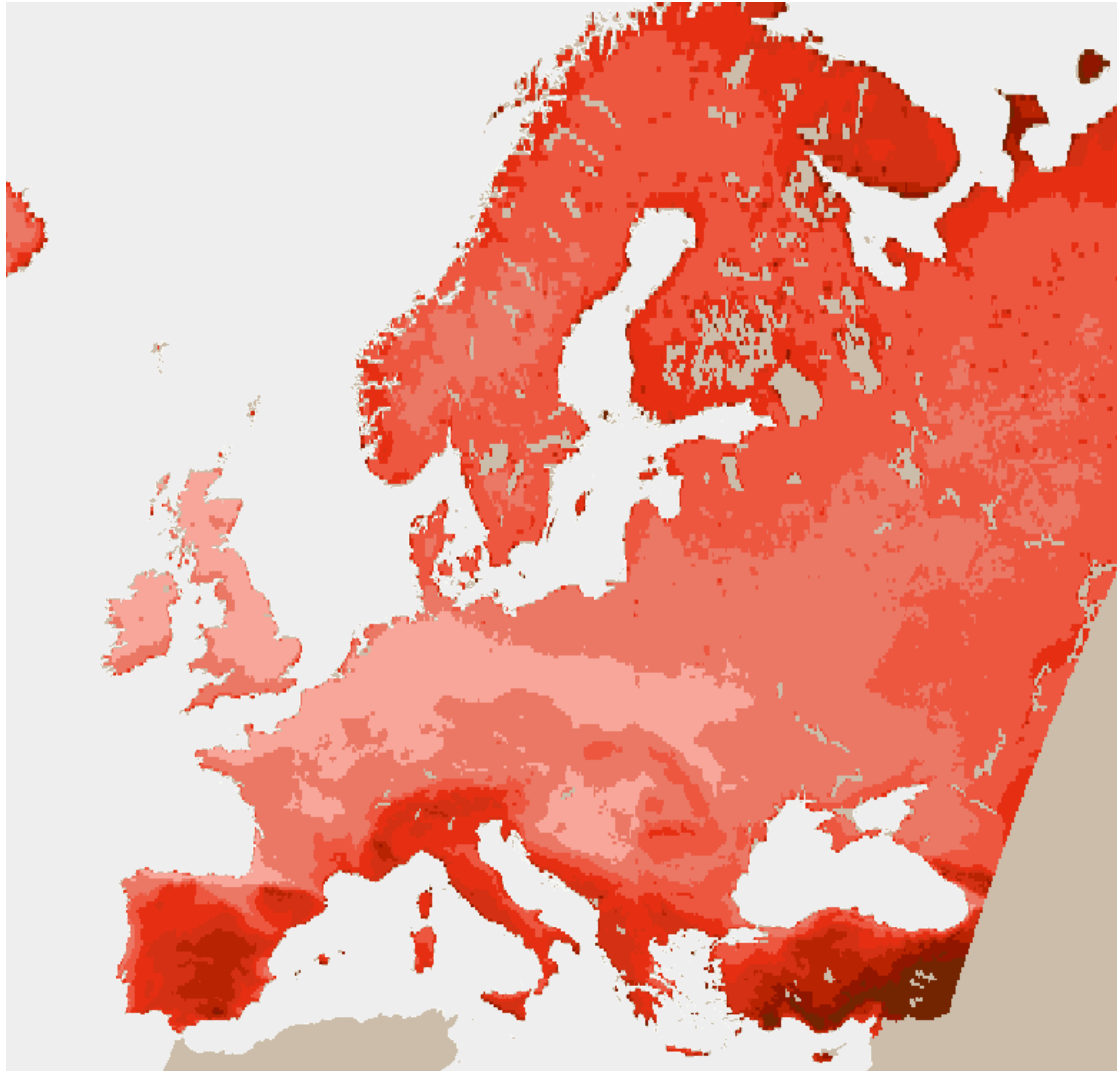
*SC.2, 73rd session
Geneva, 25-27 November 2019*



Outcomes of the Group of Experts on Climate Change Impacts and Adaptation for Transport Networks and Nodes



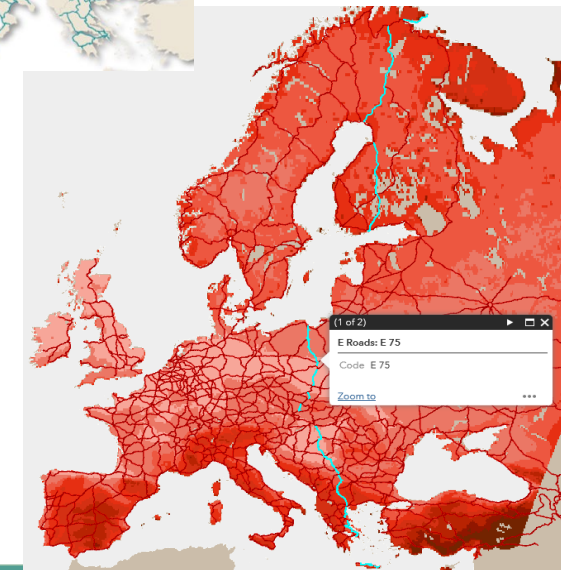
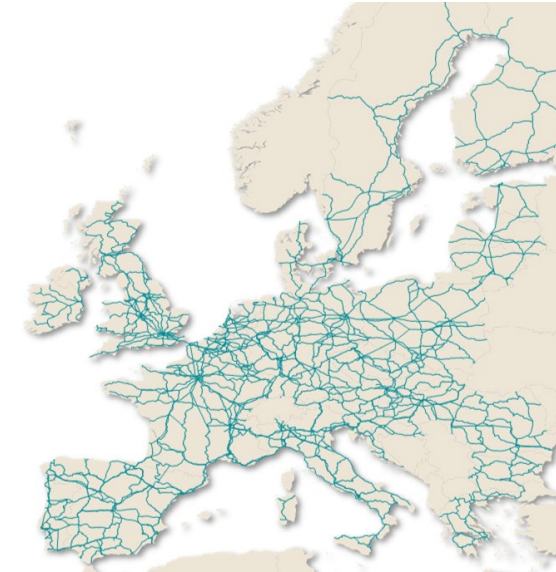
Outcomes of the Group of Experts on Climate Change Impacts and Adaptation for Transport Networks and Nodes



Outcomes of the Group of Experts on Climate Change Impacts and Adaptation for Transport Networks and Nodes

Some of the lessons learned:

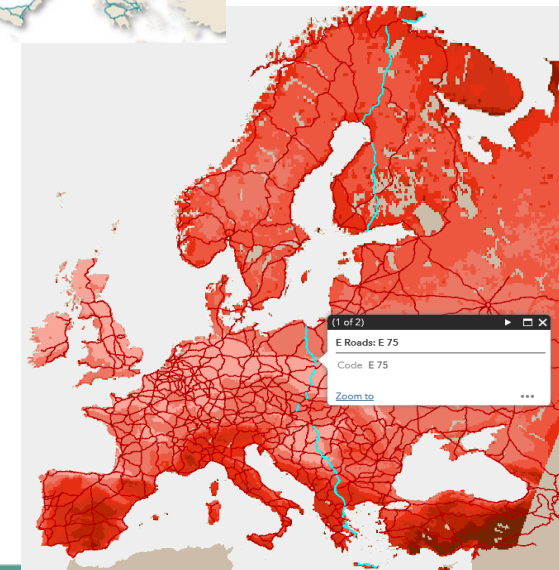
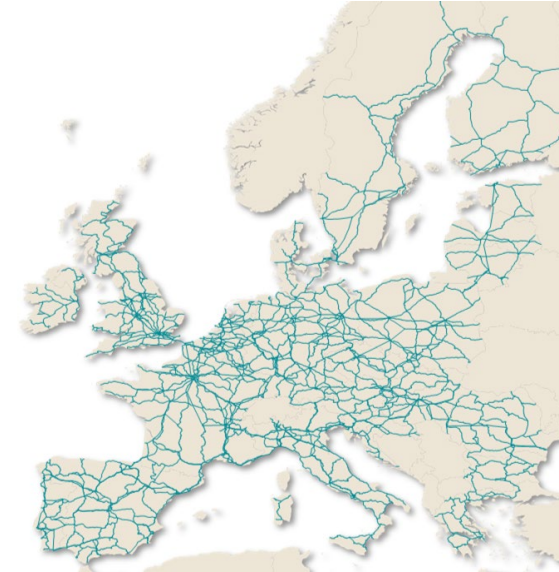
- Data limitations
 - on transport infrastructure (geo-coded) and on usage data (traffic volumes, freight processed)
- First step analysis as a good basis – exposure identified
- First step analysis insufficient / complementary analysis needed (natural and anthropogenic factors, characteristics of specific asset, downscaling of projections, impact modelling....)



Outcomes of the Group of Experts on Climate Change Impacts and Adaptation for Transport Networks and Nodes

Some of the recommendations:

- Improve availability of geo-coded networks and nodes data (call to WPs managing the infrastructure agreements)
 - Geo-code networks and nodes data and present them in GIS
 - Share data on use (census by WP.6)
-
- Implement national projects (with assistance where necessary) to better understand vulnerability to climate change of transport systems



Outcomes of the Group of Experts on Climate Change Impacts and Adaptation for Transport Networks and Nodes

Requested follow-up

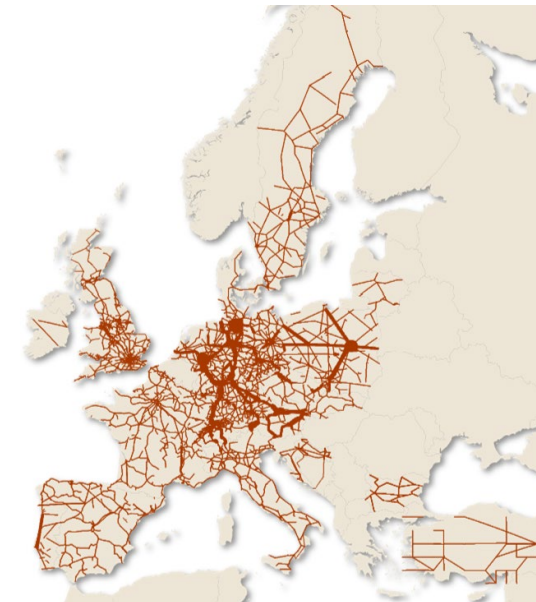
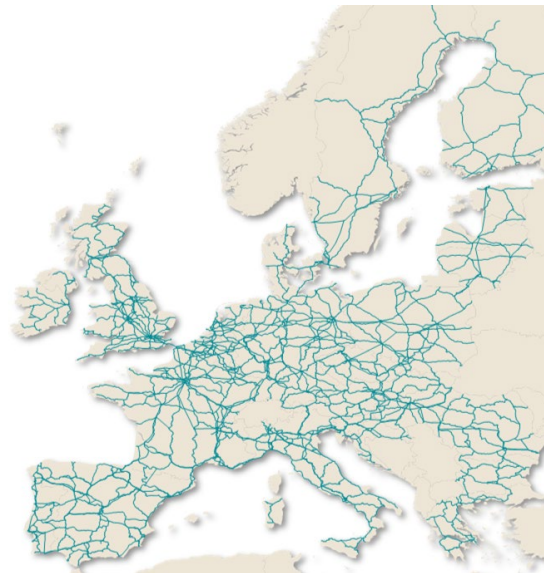
List of railway lines

I. Numbering of lines at the European level

North-South

E 03	Glasgow — Stranraer — Larne — Belfast — Dublin — Holyhead — Crewe — London — Folkestone — Dover
E 05	Lisboa — Coimbra — Pampilhosa — Vilar Formoso — Fuentes de Oñoro — Medina del Campo — Burgos — Porto — Orléans (Les Aubrais) — Paris — Irún — Bordeaux — Vendôme
E 07	Paris — Orléans (Les Aubrais) — Vendôme — Bordeaux — Hendaye — Irún — Burgos — Avila — Madrid — Aranda de Duero
E 09	Paris — Lille — Calais
E 051	Calais — Paris
E 053	Madrid — Córdoba — Bobadilla — Algeciras
E 15	Amsterdam — Den Haag — Rotterdam — Roosendaal — Antwerpen — Bruxelles — Quévy — Feignies — Aulnoye — Paris — Dijon — Lyon — Avignon — Tarascon — Marseille — Le Creusot
E 23	Dunkerque — Aulnoye — Thionville — Metz — Frouard — Toul — Culmont — Chalindrey — Dijon — Vallorbe — Lausanne — Brig
E 25	Bruxelles — Arlon — Sterpenich — Kleinbettingen — Luxembourg — Bettembourg — Thionville — Metz — Strasbourg — Mulhouse — Basel — Olten — Bern — Brig — Domodossola — Rho — Milano — Genova
E 27	Liège — Gouvy — Troisvierges — Luxembourg
E 35	Amsterdam — Utrecht — Arnhem — Emmerich — Duisbourg — Düsseldorf — Köln — Mainz — Mannheim — Karlsruhe — Basel — Olten — Chiasso — Milano — Bologna — Firenze — Roma — Napoli — Salerno — Messina
E 391	Dnipropetrovsk — Lozovaya — Krasny Liman — Kharkov
E 43	Köln — Limburg — Frankfurt (Main) — Heidelberg — Stuttgart — Ulm — Augsburg — München — Freilassing — Salzburg — Mannheim
E 45	Oslo — Kornsjo — Göteborg — Helsingborg — Helsingør — København — Nykøbing — Rodby — Puttgarden — Hamburg — Hannover — Würzburg — Nürnberg — Ingolstadt — München — Kufstein — Wörgl — Innsbruck — Brennero — Verona — Bologna — Ancona — Foggia — Bari
E 451	Nürnberg — Passau — Wels
E 51	Gedser — Rostock — Berlin — Hall — Erfurt — Nürnberg — Leipzig
E 53	Helsingborg — Hässleholm
E 530	Nykøbing — Gedser
E 55	Stockholm — Hässleholm — Malmö — Trelleborg — Sassnitz Hafen — Stralsund — Berlin/Seddin — Dresden — Bad Schandau — Decin — Praha — Linz — Salsburg — Schwarzach St. Veit — Villach — Arnoldstein — Tarvisio — Udine — Venezia — Bologna
E 551	Praha — Horní Dvořiště — Summerau — Linz — Selzthal — St. Michael

Geo-code AGC network (CPs to send to UNECE shapefiles for their E-railway lines); Support WP.6 in the collection of the traffic data



Thank you for your attention

