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TIPTAP: Territorial Impact Package for Transport and Agricultural Policies

Applied Research Project 2013/1/6

Addendum to Final Report

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This addendum integrates the Final Report of the TIPTAP project and in particular strengthens the analysis performed through the Flag model (alert conditions).

The Flag model is applied here to two indicators of transport policy, namely Emissions and Safety, but different thresholds are adopted with respect to the ones utilised in the Final Report.

As of emissions, a zero-increase threshold compared to the present condition (2005) is still retained. This limit is strict (but looser with respect to the Kyoto engagement on reductions), but partly unfair with respect to regions with low present emissions (e.g. as a consequence of low car ownership rate). In order to take this element into account, a double criterion is adopted, namely:

a. present emissions above EU average (indicator: emissions per Km2 of usable land), and
b. increase in emissions with respect to the present level.

Therefore, those areas presently exceeding the EU average and not able to reduce their emissions are 'flagged'. Three levels of "flagging" are also established, as in the Final Report:

- yellow flag, with increases 2005-2030 between 0 and 50%,
- orange flag with increases between 50% and 100%, and
- red flag with increases beyond 100%.

As a consequence of the new criteria, the number of flagged regions is sharply reduced with respect to the previous Report in all scenarios and especially in Eastern countries and Germany. Countries with a relatively low present level of emissions, such as Romania and Bulgaria, are not flagged anymore.

Still, several European regions are 'flagged' in the baseline scenario (Map. A.1). Most countries will remain inside the limit of +50% (many regions in Spain, France, Northern Italy, England and Czech Republic, plus Attiki and Thessaloniki in Greece), but some regions in Norway (the corridor north of Oslo), Poland (on the north-south corridor from Dantzig to Lodz and Krakow) and Lithuania (Vilnius), together with Luxembourg and Inner London will go beyond this limit.

Taking up pro-active policies and regulatory countermeasures, the picture is due to change. In the "infrastructure" scenario in fact (Map A.2), which indicates changes with respect to the baseline scenario, the number of "flagged" regions decreases and main problems would still concern many regions in Poland and Spain, the Po Valley in Italy and many capital regions (Zagreb, Praha, Budapest, Vilnius, Luxembourg). In the third, "pricing" scenario (Map A.3), the number of "flagged" regions reduces even more sharply, underlining the effectiveness of road pricing and regulatory policies.

By the same token, concerning the second impact analysis, a reduction of Safety as a consequence of policy interventions is still considered intolerable, but only in those areas where safety conditions are already below the EU average. The threshold value is thus established by combining two criteria:

a. present safety conditions below EU average, and
b. decrease in safety with respect to the present level.

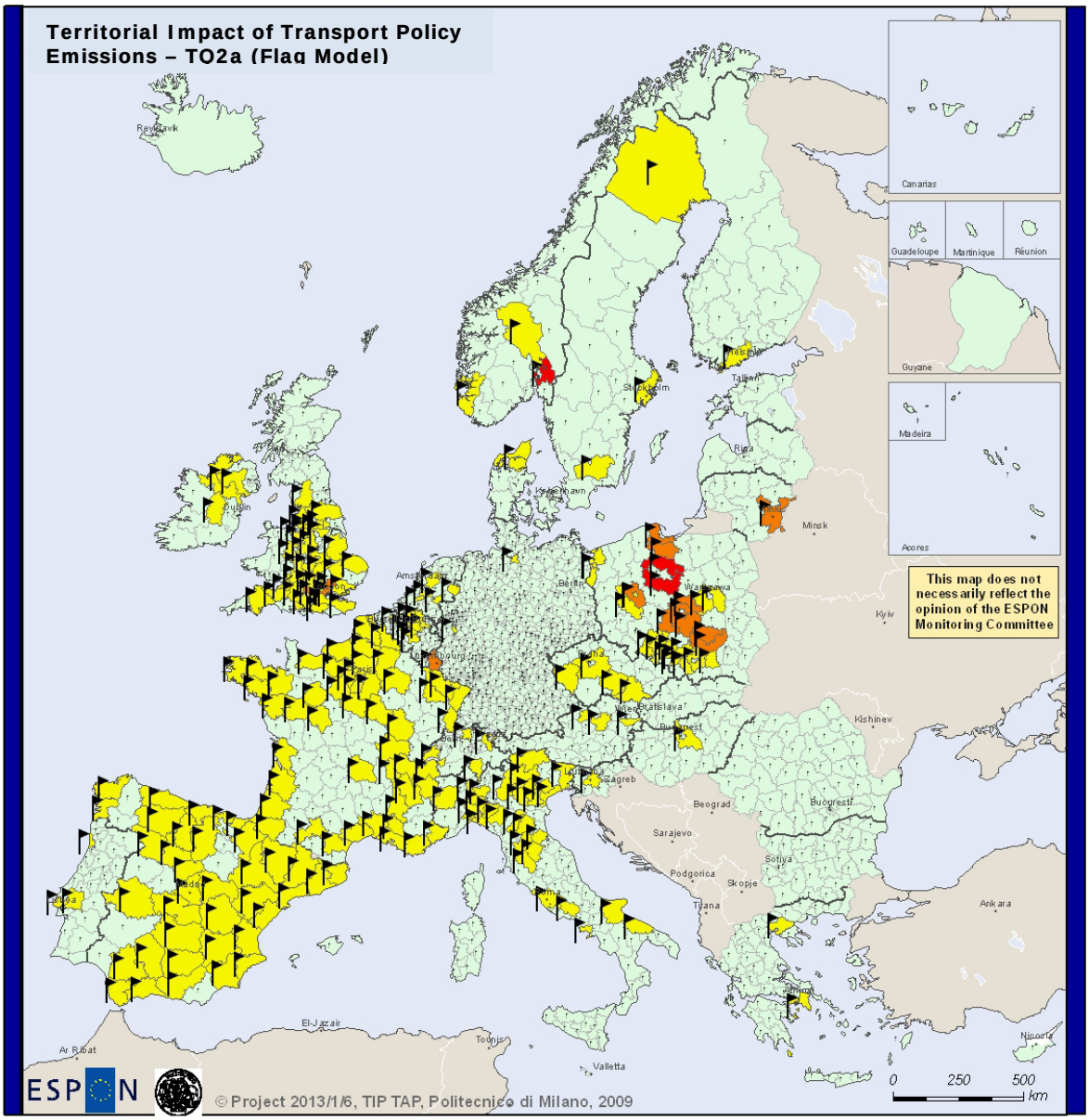
Regions that do not meet these thresholds are accordingly ‘flagged’.

Maps A.4 and A.5 show the ‘flagged’ regions in the case of the Safety indicator in the baseline and infrastructure scenarios respectively. The third scenario is primarily oriented to transport demand reduction (i.e. congestion and emissions reduction) and thus not chiefly focused on safety enhancement; accordingly, the corresponding map is not presented here.

The introduction of the second threshold reduces the number of flagged regions in both scenarios with respect to the previous results presented in the Final Report, but less significantly as compared to the Emissions indicator case. The main alert situations concern a large part of central England, from London along the main western and northern corridors, and southern Scotland; many regions in Holland and Germany (Munich, Frankfurt, Bremen, many cities in Nordrhein-Westfalen like Köln and Bonn); the Paris rings and Le Havre; Kopenhavn, Stockholm and some other regions in Sweden; some regions in Switzerland (Bern, Neuchâtel and Zürich); some scattered regions in the Eastern European Countries.

In the “infrastructure” scenario, approximately the same regions will experience a further decrease in safety conditions. This result will hit mainly central England, the Rhine Valley, Holland and some Belgian regions.

MAP A.1. The Flag model: warnings about emissions in the baseline scenario (a)



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Regional level: NUTS3 (2006)
Source: EUROSTAT, ESPON database
Origin of data: own calculation
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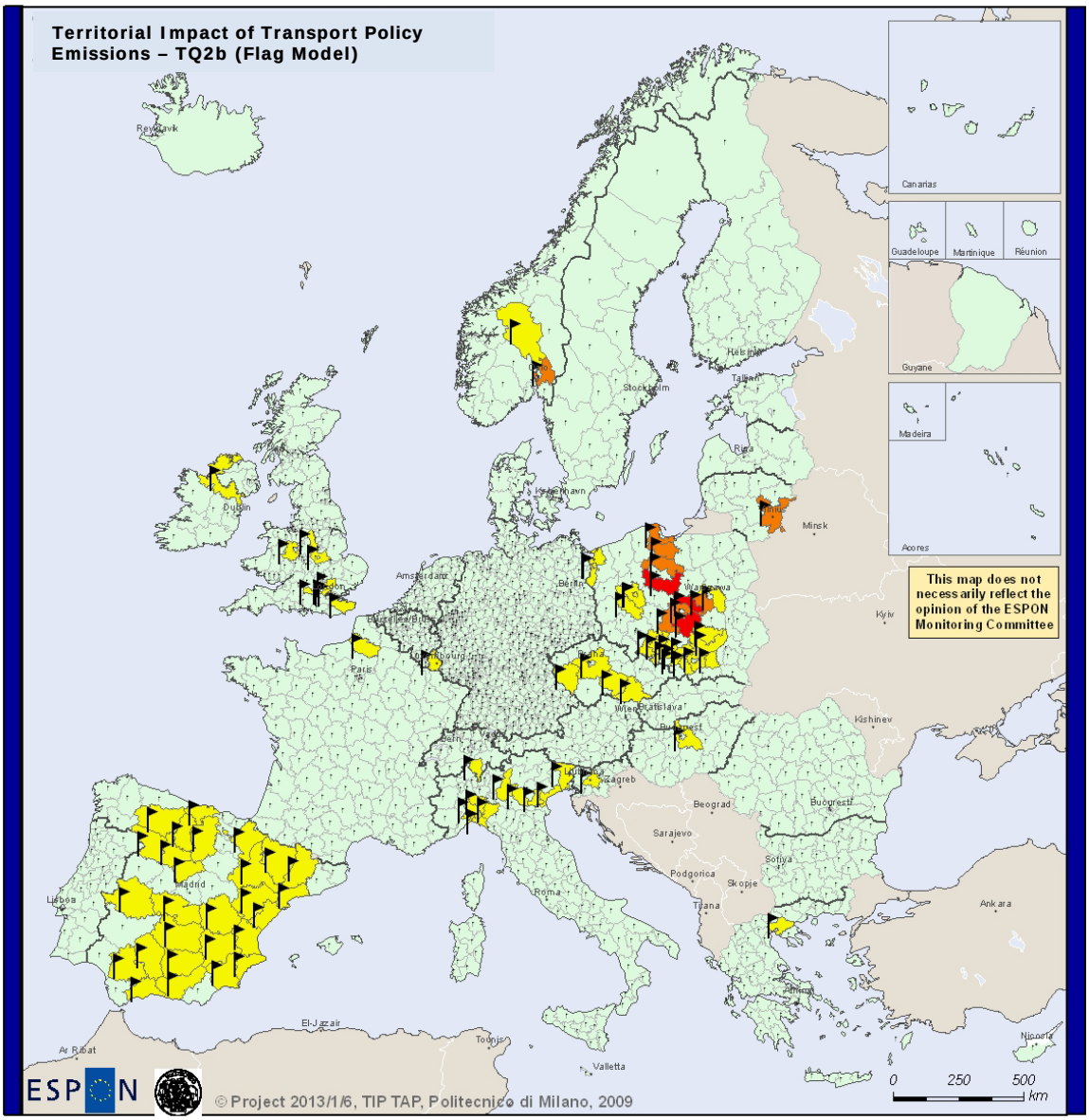
LEGEND
Emissions level 2005 > EU average and increase in emissions 2005-2030 >0
Scenario A (baseline)

- Flagged Regions
- Over the Threshold
- More than 50%
- More than 100%

MAP A.2. The Flag model: warnings about emissions in the infrastructure scenario (b)



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Regional level: NUTS3 (2006)
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Origin of data: own calculation
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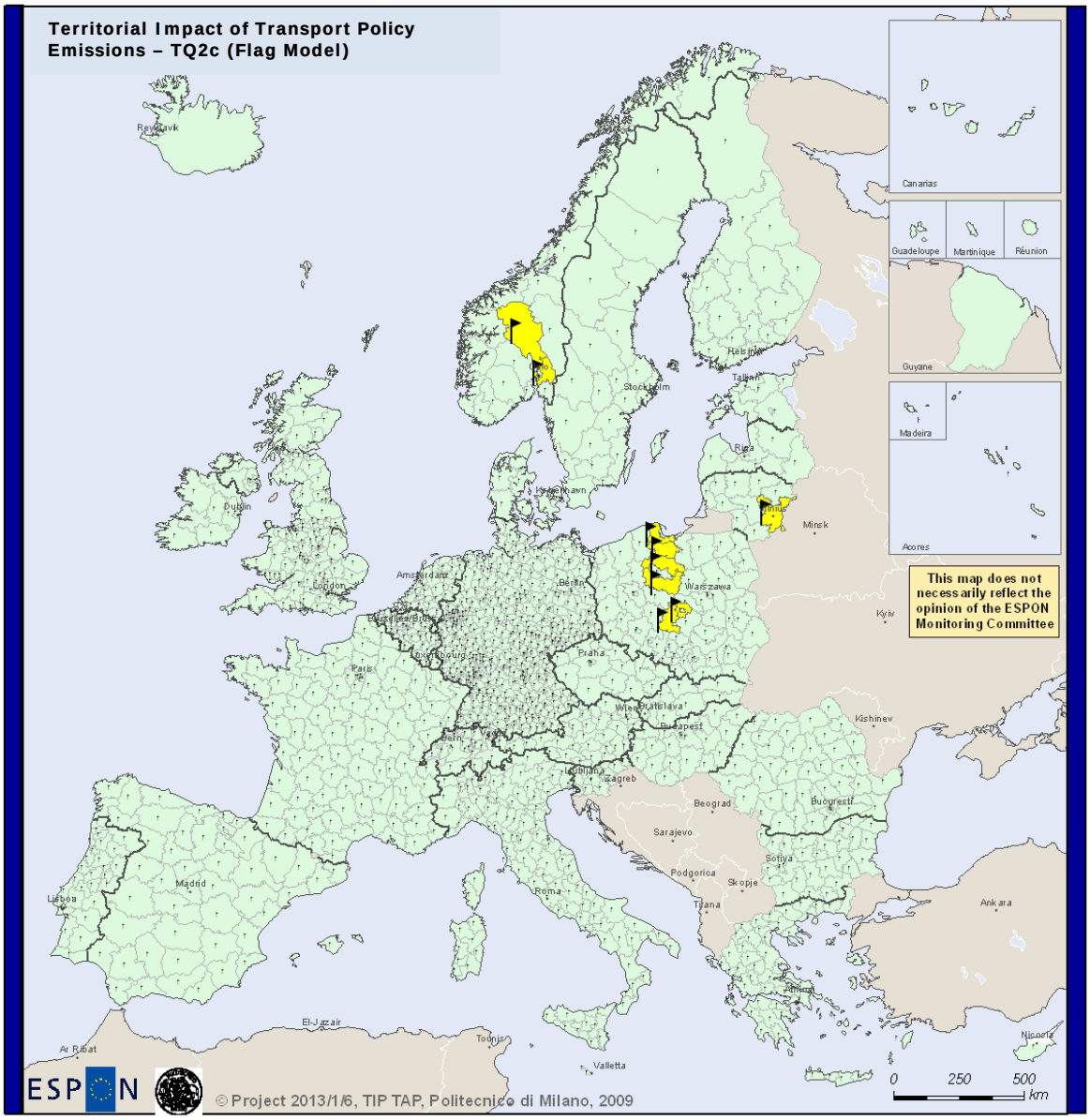
LEGEND
Emissions level 2005 > EU average and increase in emissions 2005-2030 >0
Scenario B (infrastructure)

- Flagged Regions
- Over the Threshold
- More than 50%
- More than 100%

MAP A.3. The Flag model: warnings about emissions in the pricing scenario (c)



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LEGEND
Emissions level 2005 > EU average
and increase in emissions 2005-2030 >0
Scenario C (pricing)

Flagged Regions
Over the Threshold

Regional level: NUTS3 (2006)
Source: EUROSTAT, ESPON database
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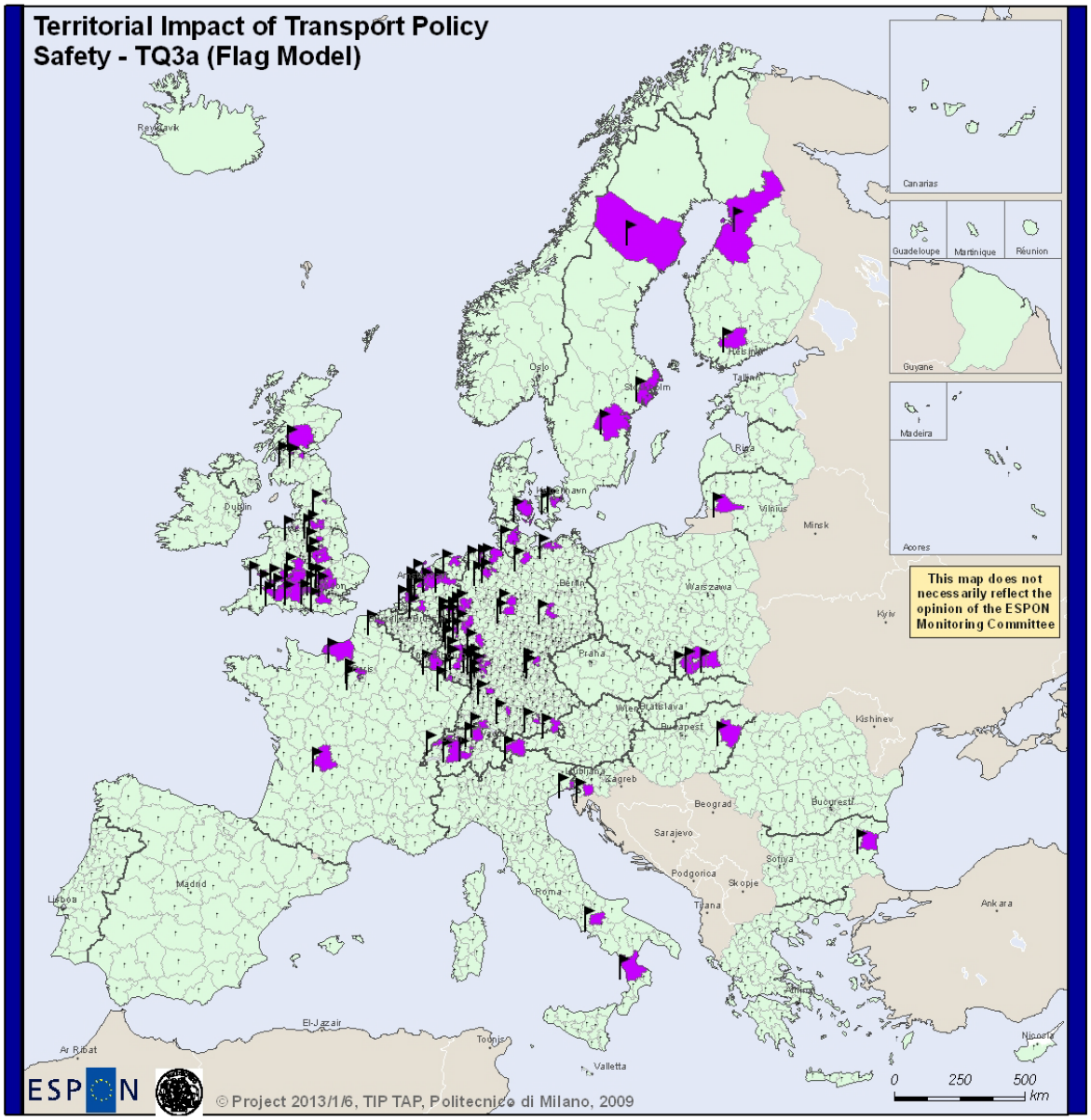
MAP A.4. The Flag model: warnings about safety in the baseline scenario (a)



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Regional level: NUTS3 (2006)
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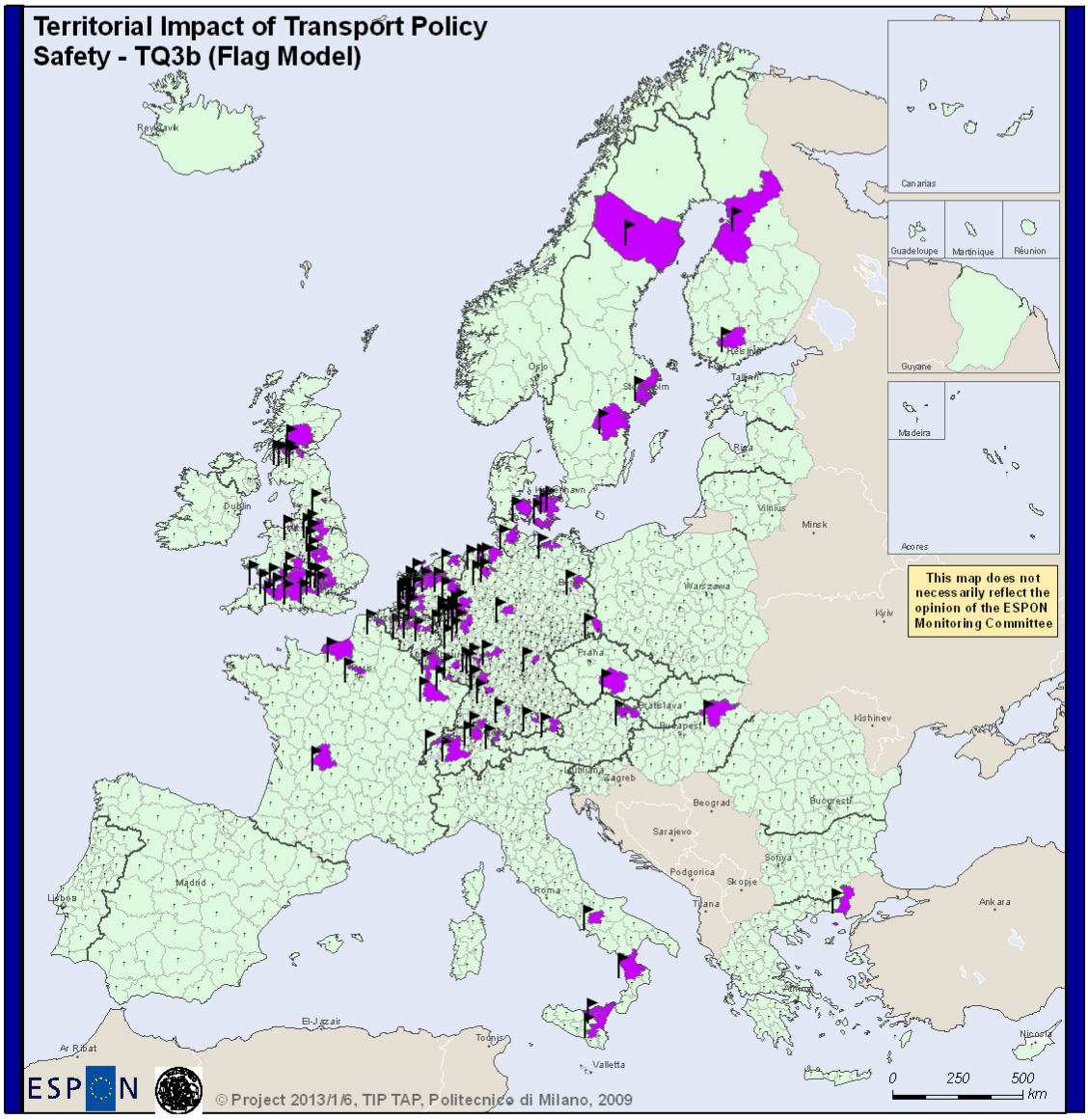
LEGEND
Safety level 2005 < EU average
and increase in safety 2005-2030 <0
Scenario A (baseline)

Flagged Regions
Over the Threshold

MAP A.5. The Flag model: warnings about safety in the infrastructure scenario (b)



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Regional level: NUTS3 (2006)
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LEGEND
Safety level 2005 < EU average
and increase in safety 2005-2030 <0
Scenario B (infrastructure)

Flagged Regions
Over the Threshold