

The 3rd World Sustainability Forum
Sustainable Urban Development (Section E).

«Industrial Risk in Thessaloniki and Urban Regeneration Context»

Christine Matikas

«Industrial Risk in Thessaloniki and Urban Regeneration Context»

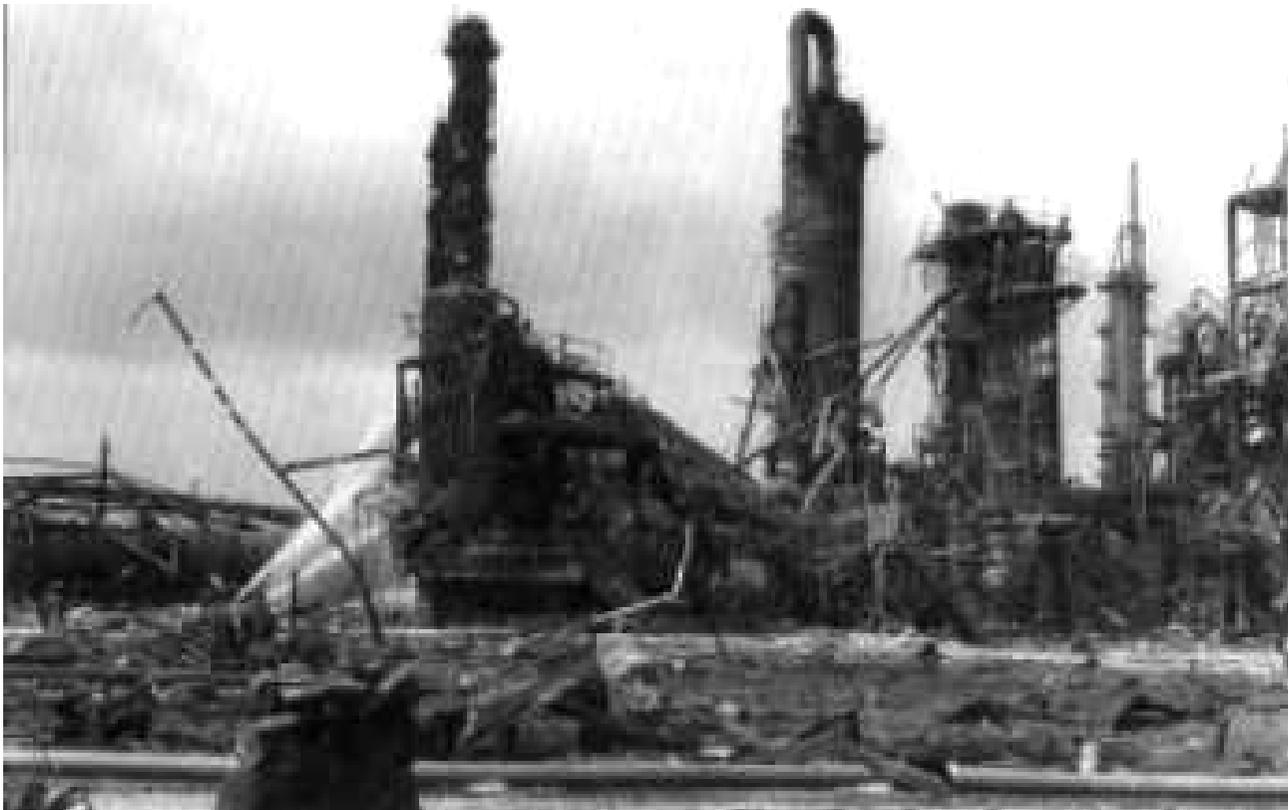
Communal Directives

For prevention, preparedness and response of Industrial Accidents

Seveso I (82/501/CEE, 87/216/CEE, 88/610/CEE), Greece 1988

Seveso II (96/82/CE), Greece 2000

Seveso III (2003/105/CE), Greece 2007



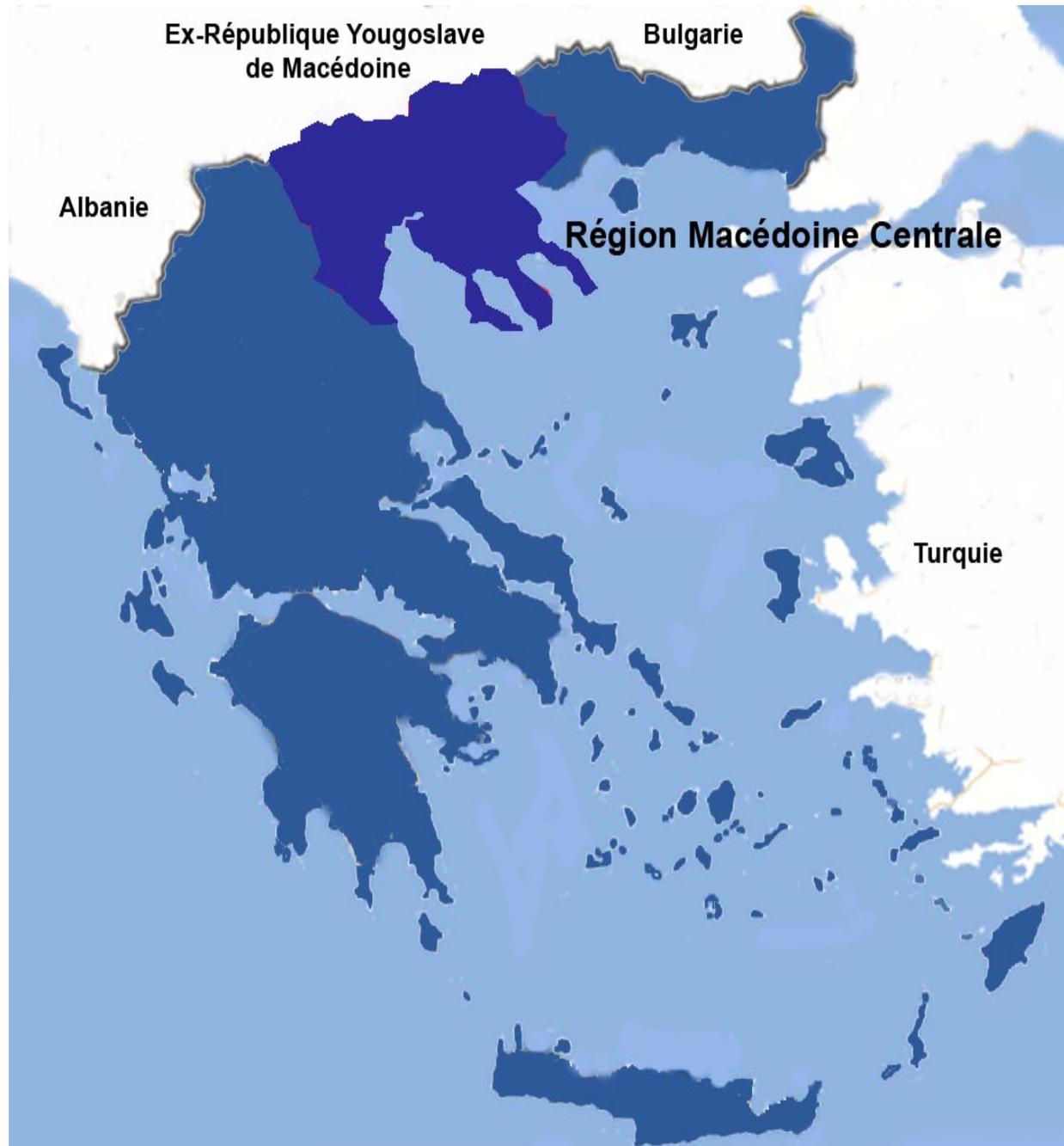
The Accident in
Seveso, town of
North Italy (1976)

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Greece, in Europe



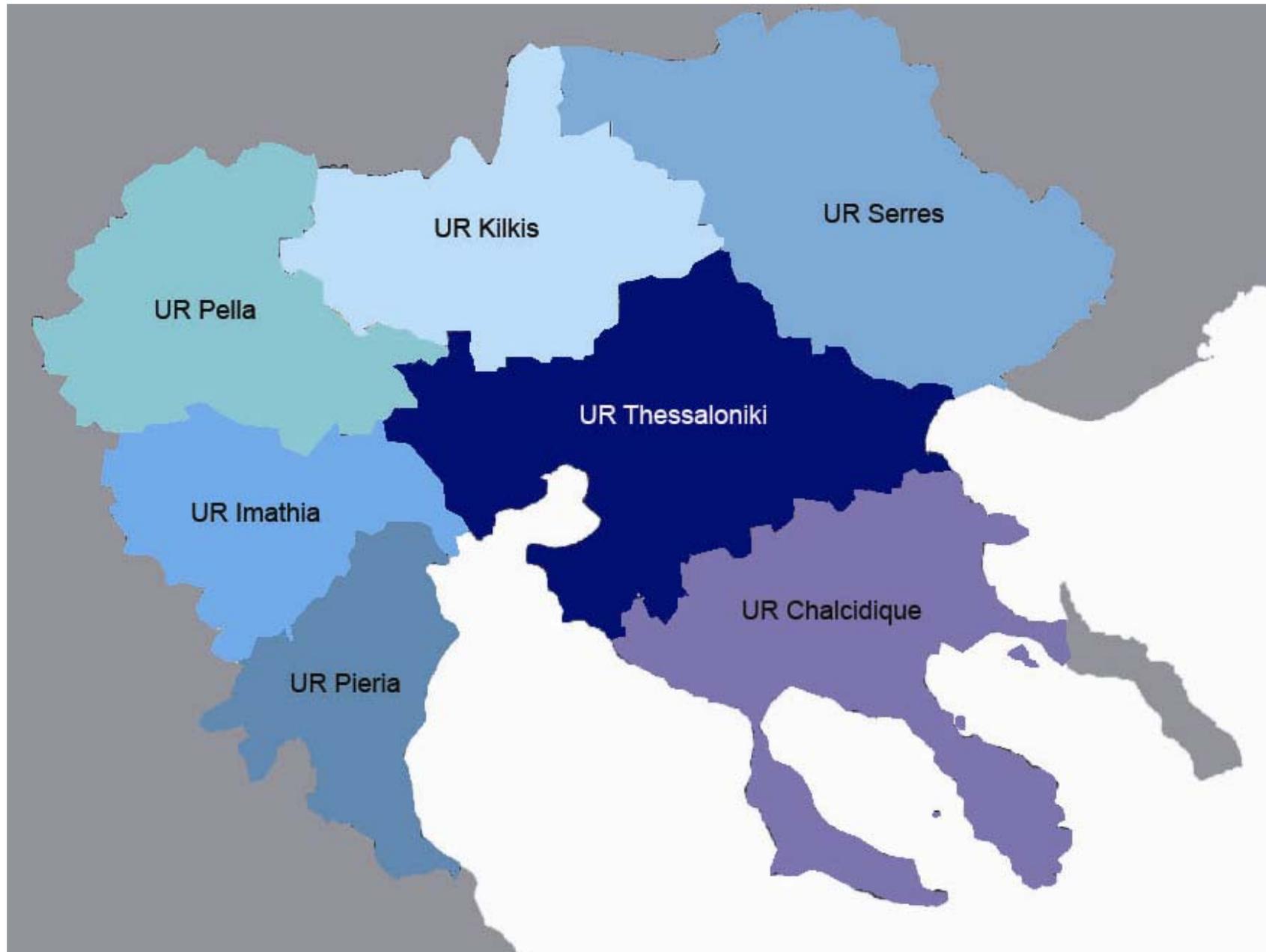
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The Region of Central Macedonia in Greece.

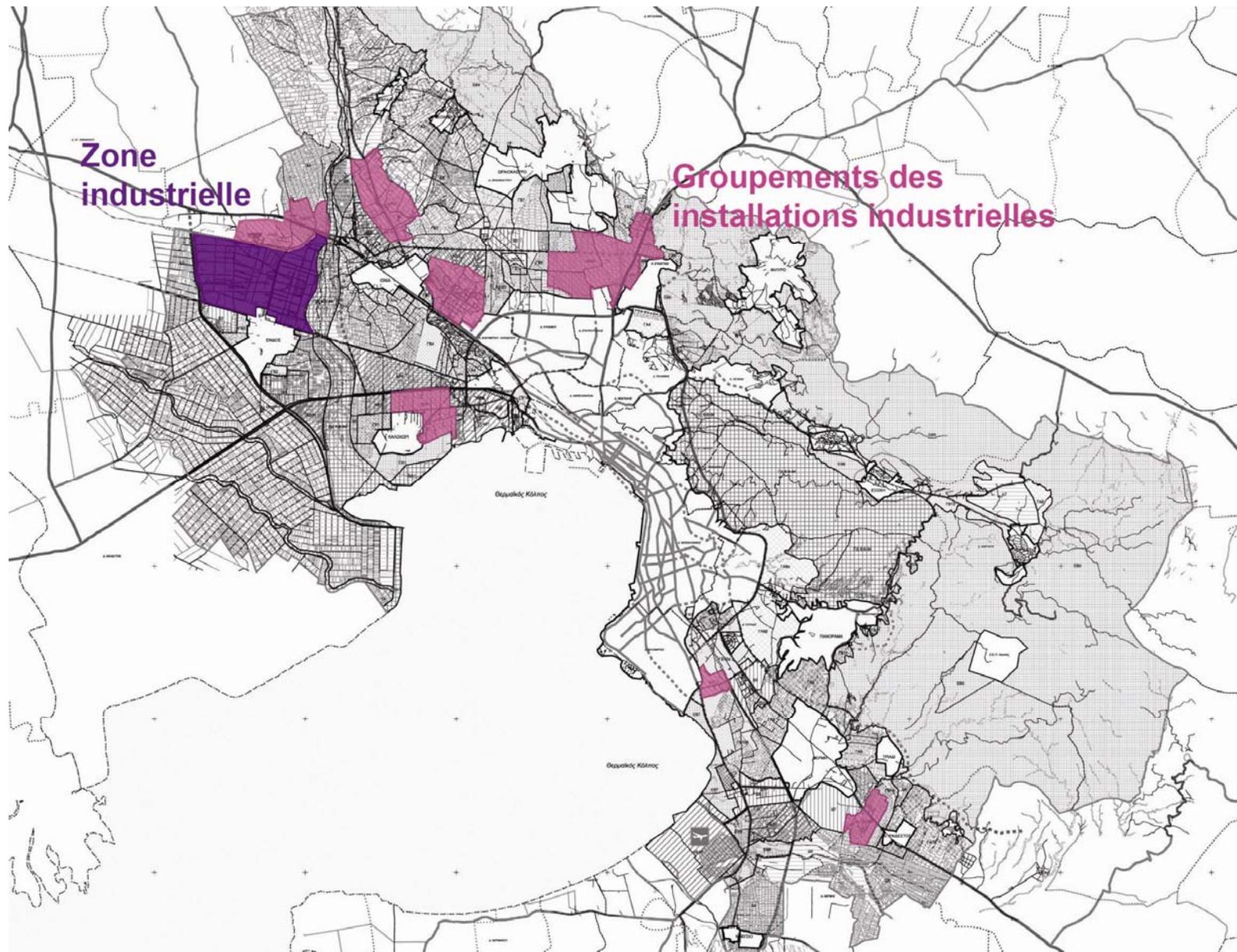
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The Regional Unit of Thessaloniki inside Region of Central Macedonia



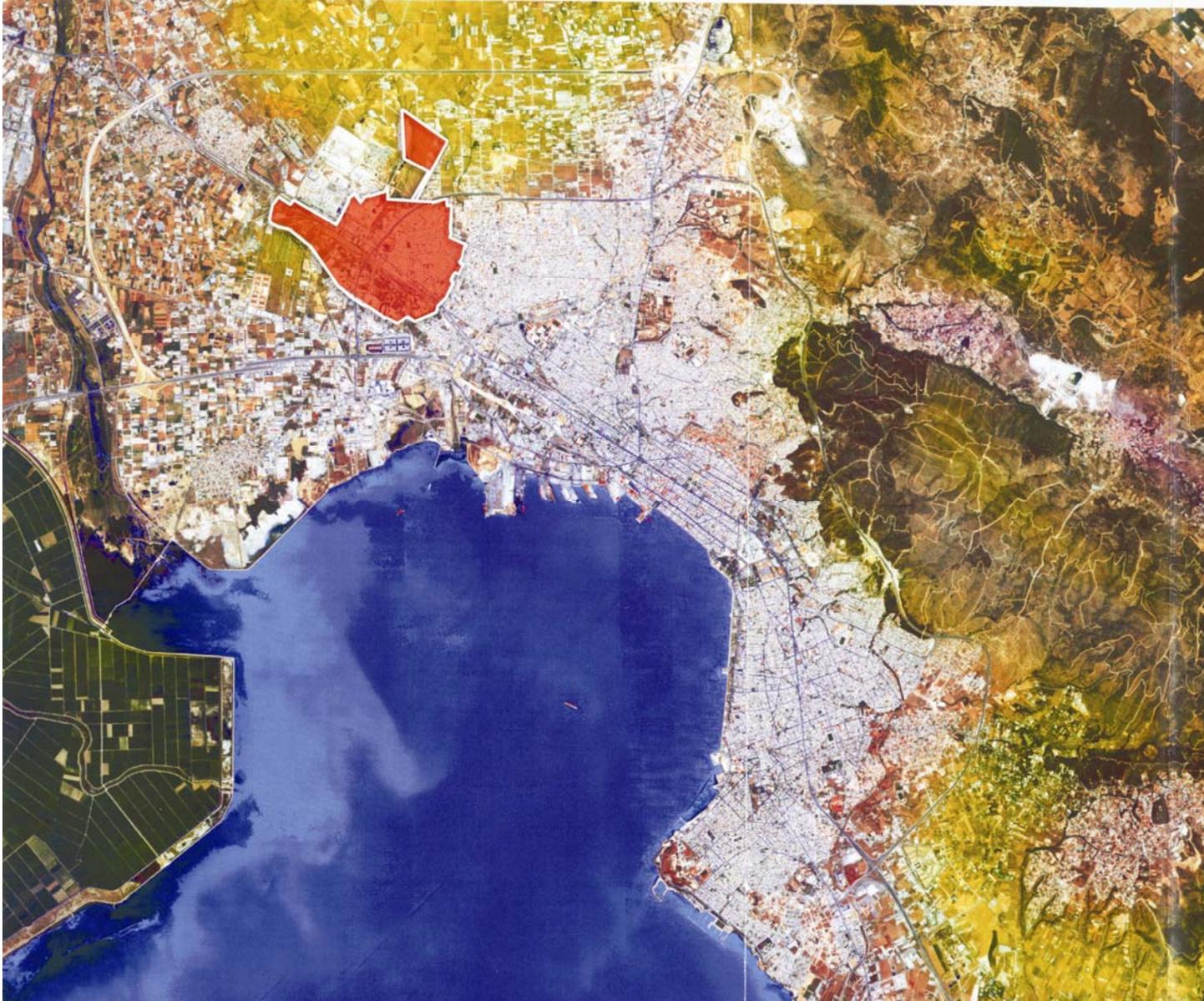
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Industrial Zone of Thessaloniki and Industrial Installations inside the suburban zone



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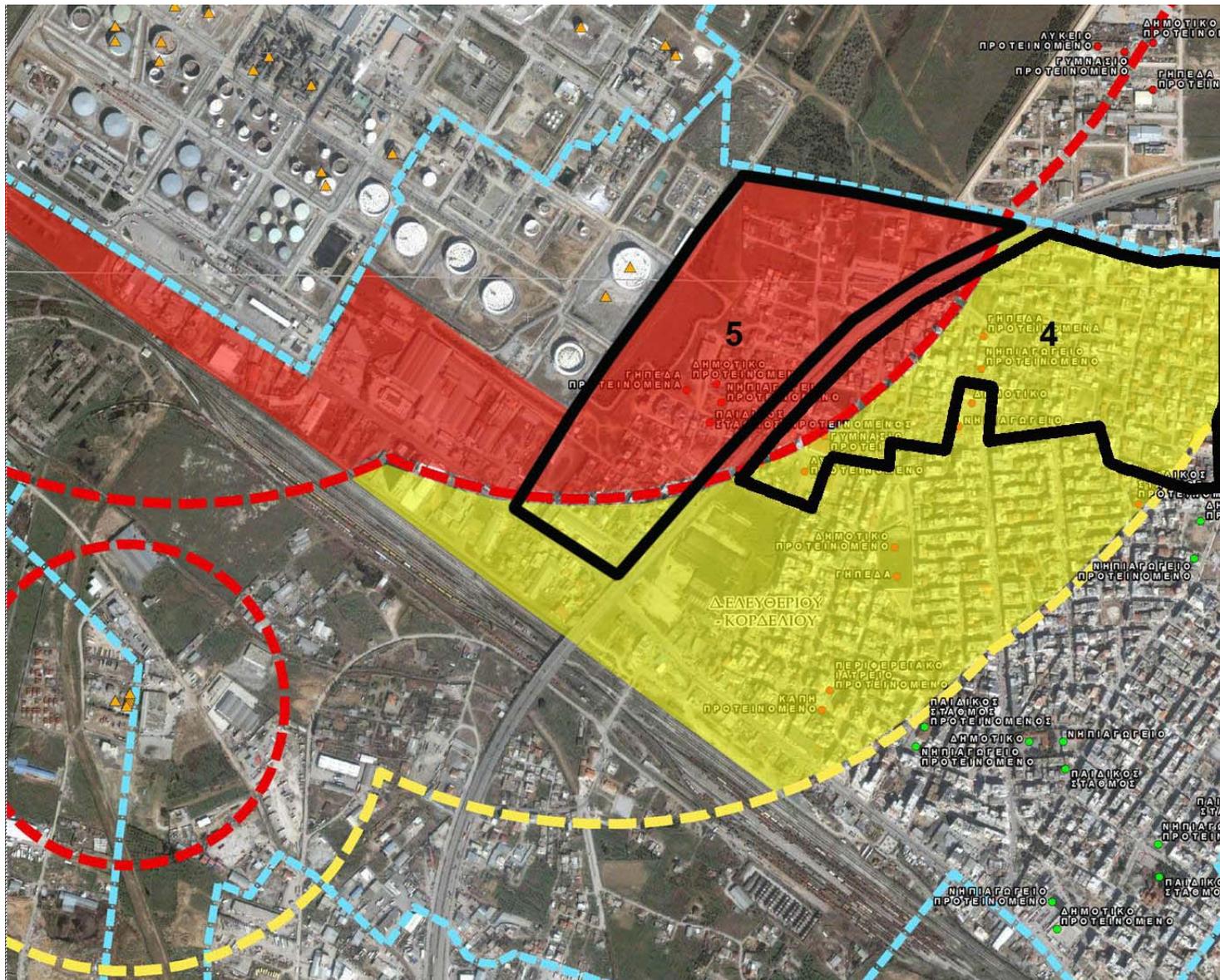
Municipality of Eleftherio Kordelio, the region in the greatest threat in Thessaloniki



in Seira, 2010, p. 25.

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The Urban Units 4 and 5 of Eleftherio Kordelio, included in the Protection Zones I (red) et II (yellow).



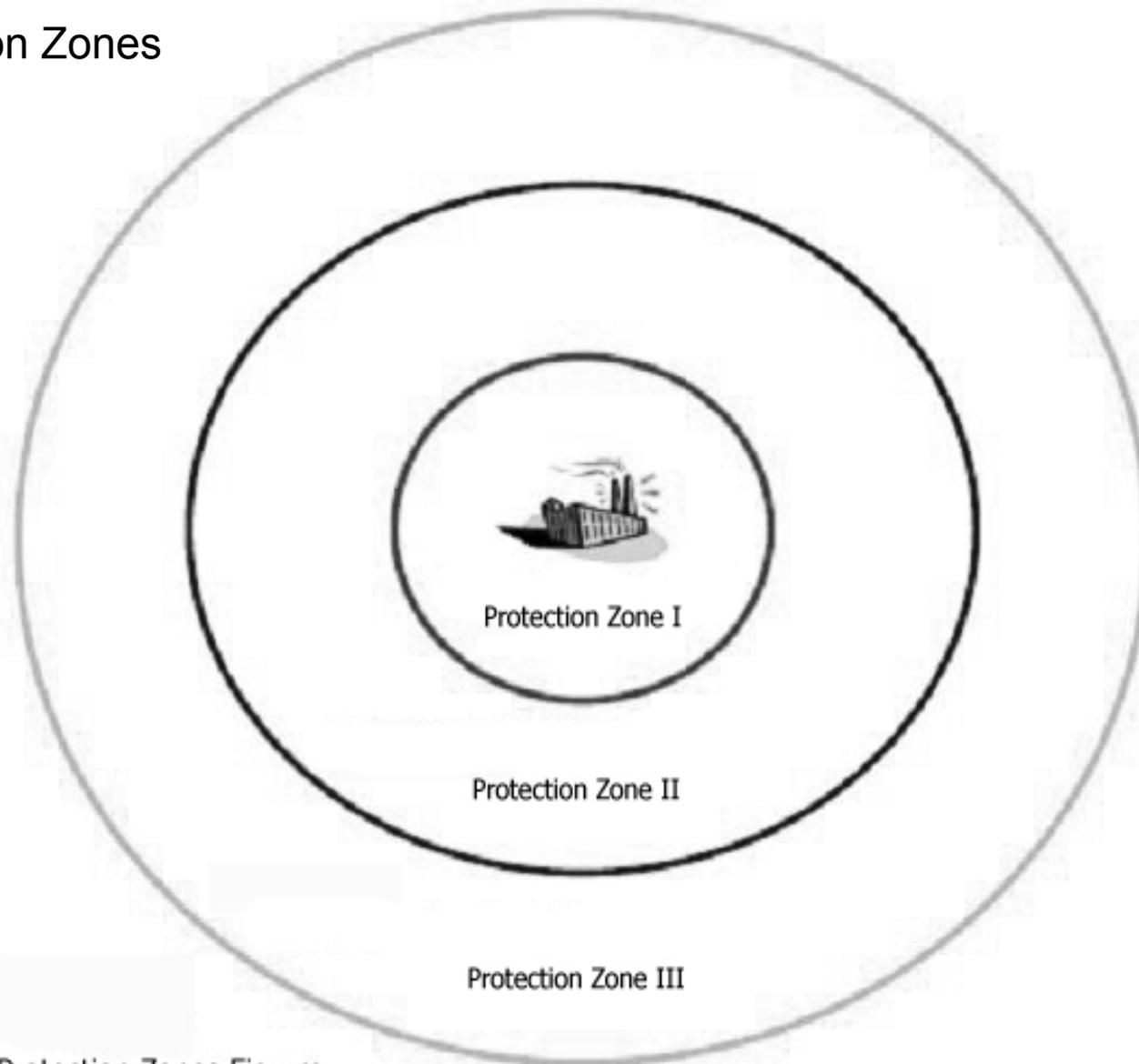
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The urban paradox of residential coexistence with the industrial risk – threat



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Protection Zones



Protection Zones Figure

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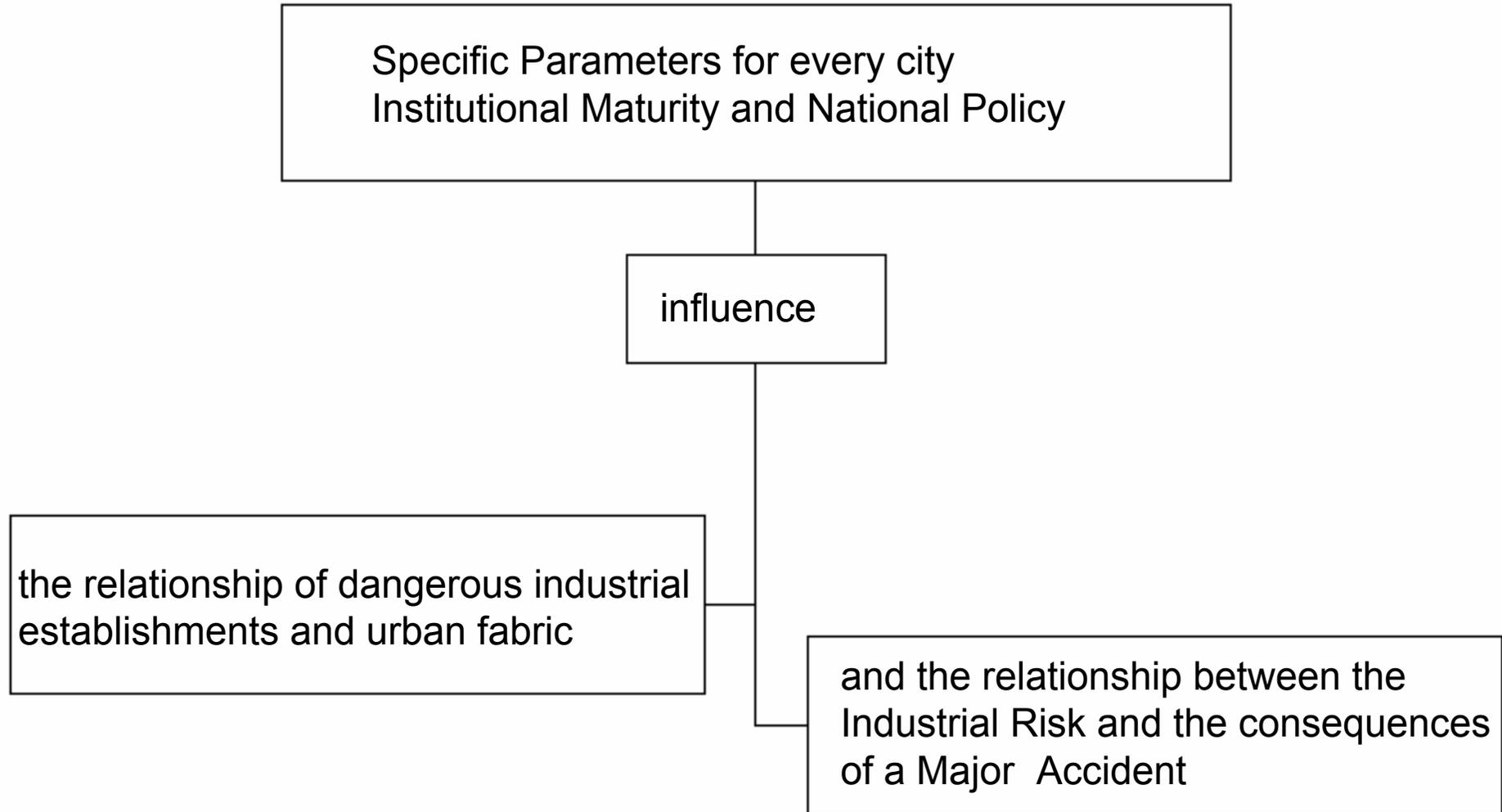
Vulnerability Diagram: the protection zones I, II and III



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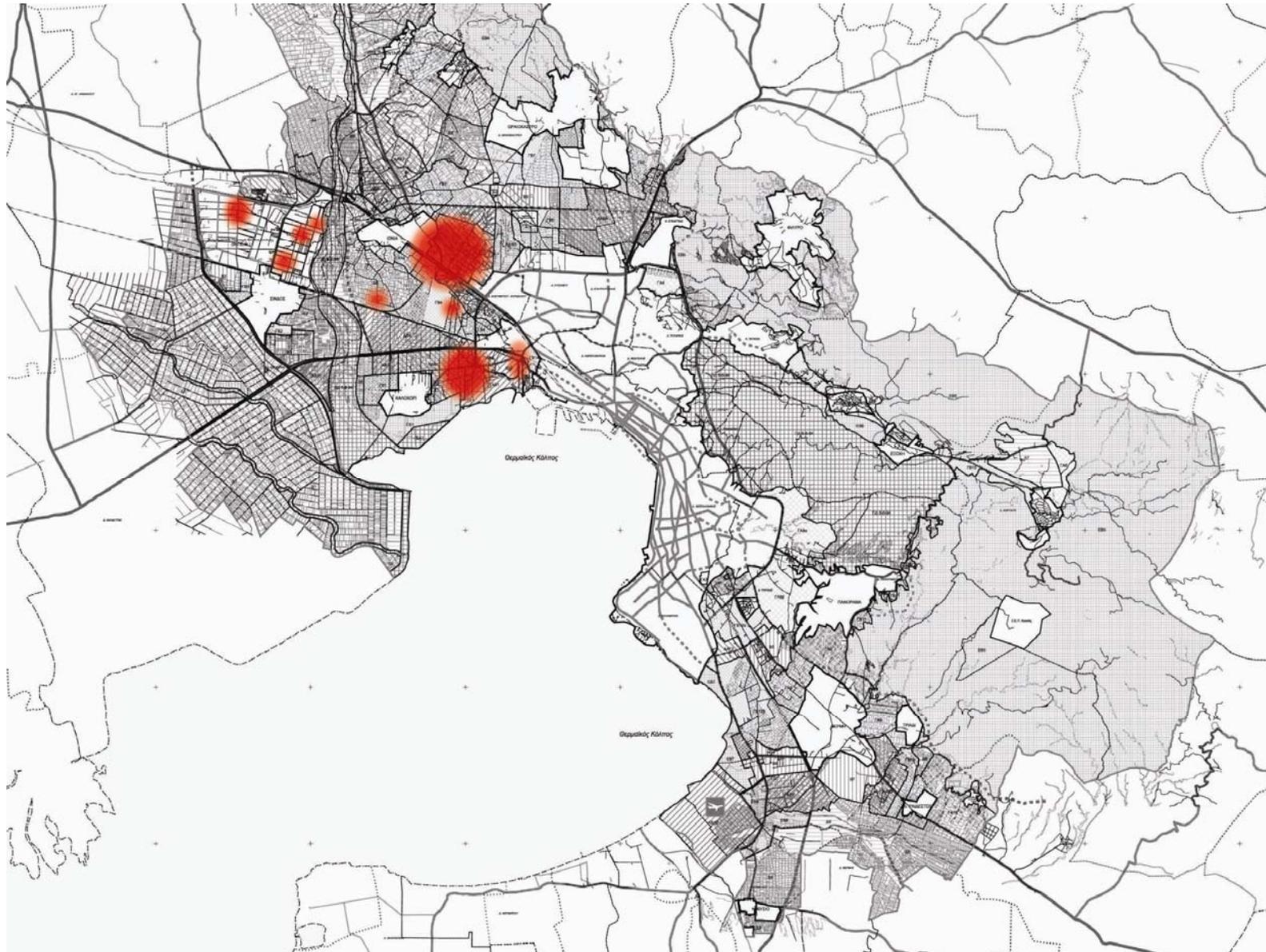
Industrial Risk – Thessaloniki, Greece

Connotation:

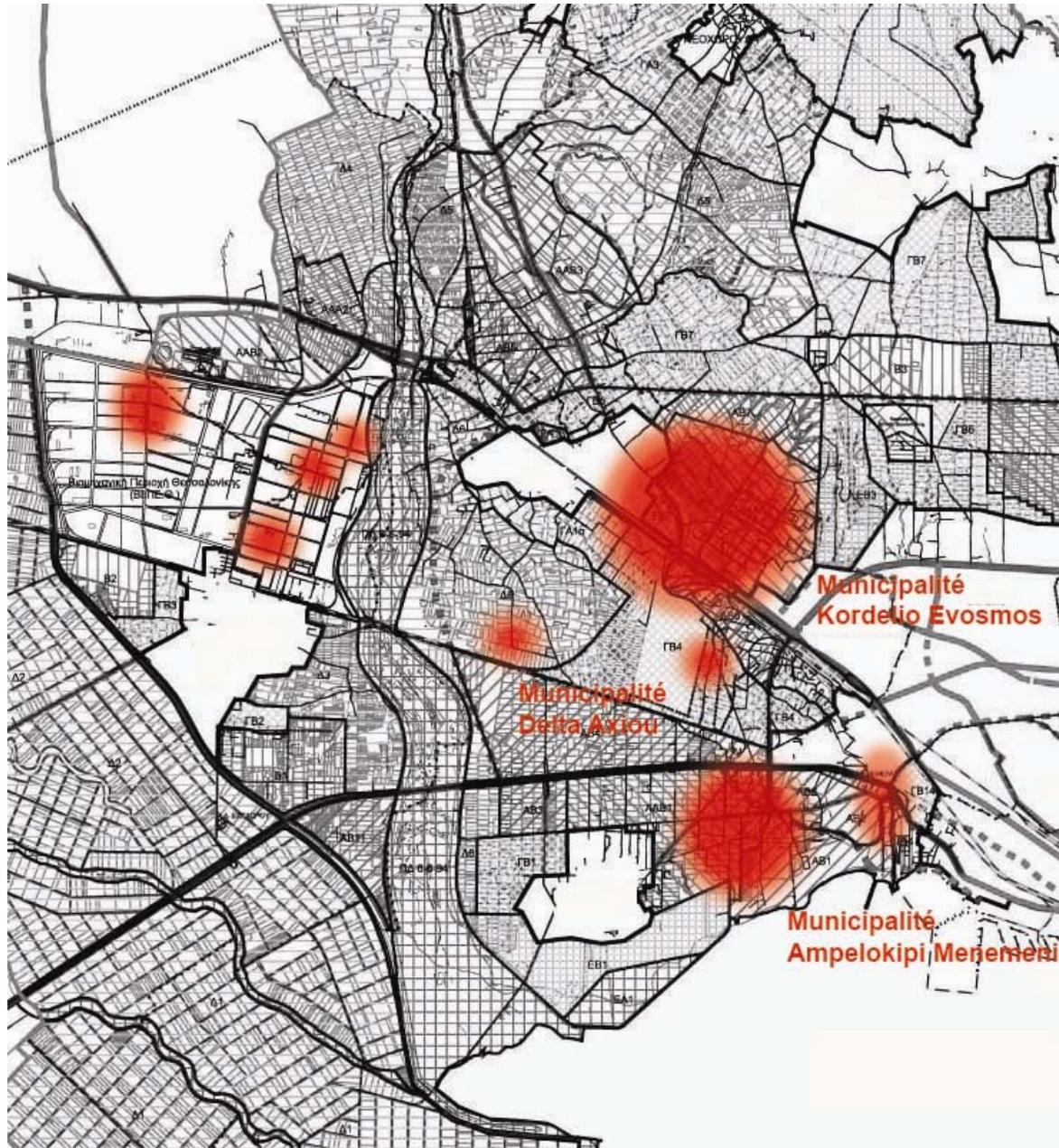


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The SEVESO Establishments in Thessaloniki



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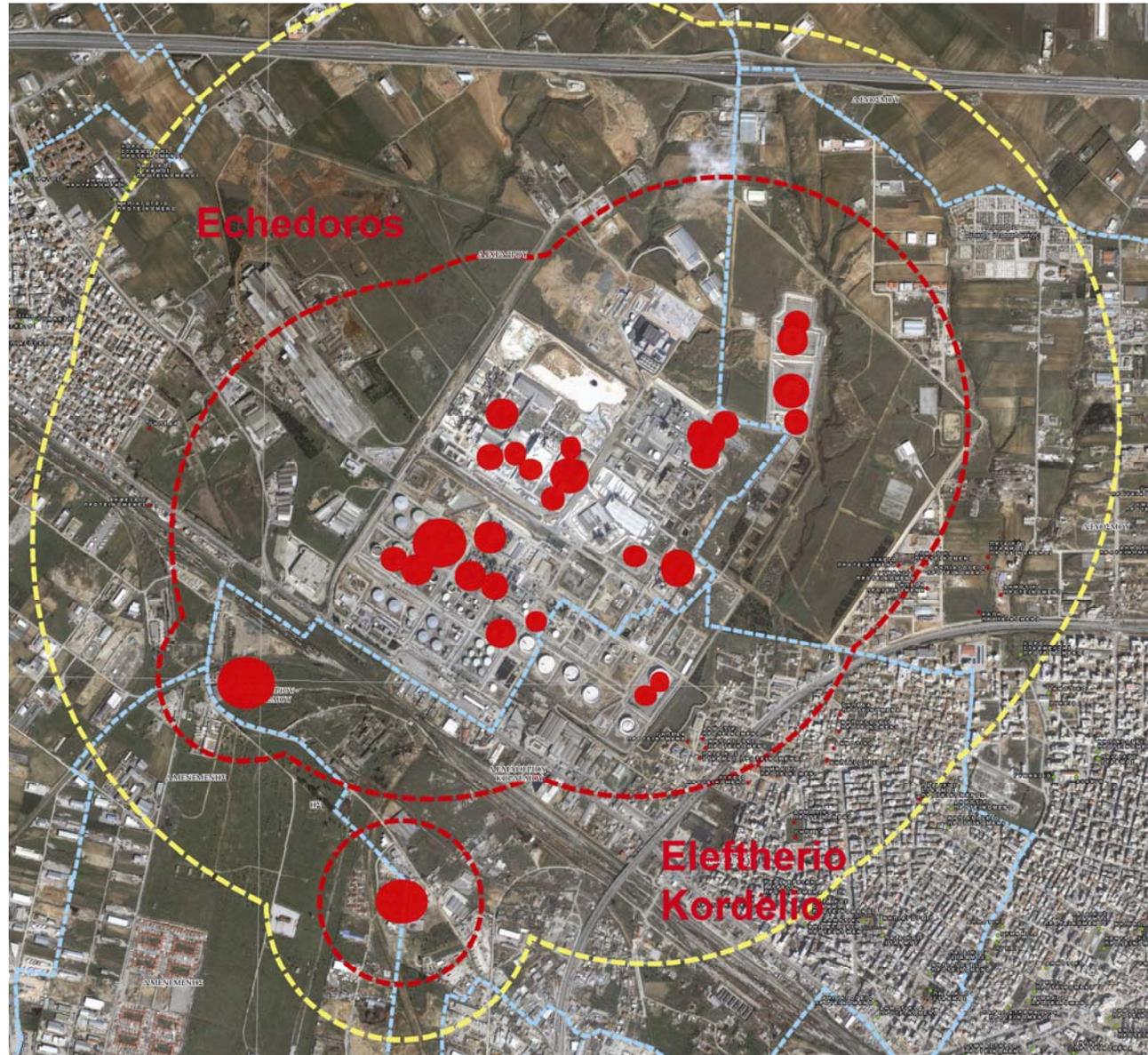
Municipalities affected by industrial risk:

1. Delta Axiou (municipal unit of Echedoros)
2. Kordelio – Evosmos (municipal unit of Eleftherio Kordelio)
3. Ampelokipi – Menemeni

in Matikas, 2012, p.118

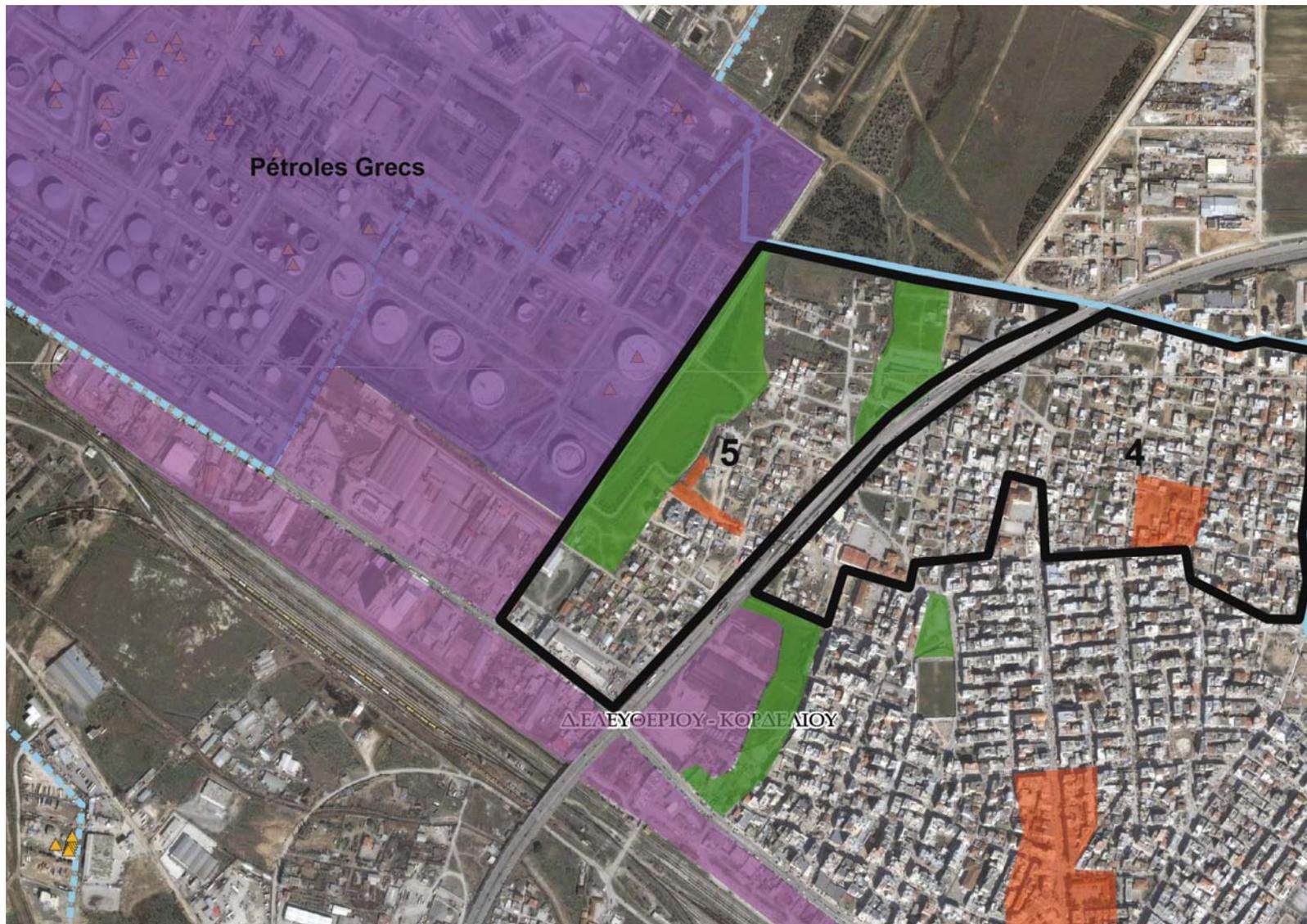
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Concentration of SEVESO installations (mainly ELPE) in Echedoros and E. Kordelio (in red).



The General Development Plan of Eleftherio-Kordelio (1988)

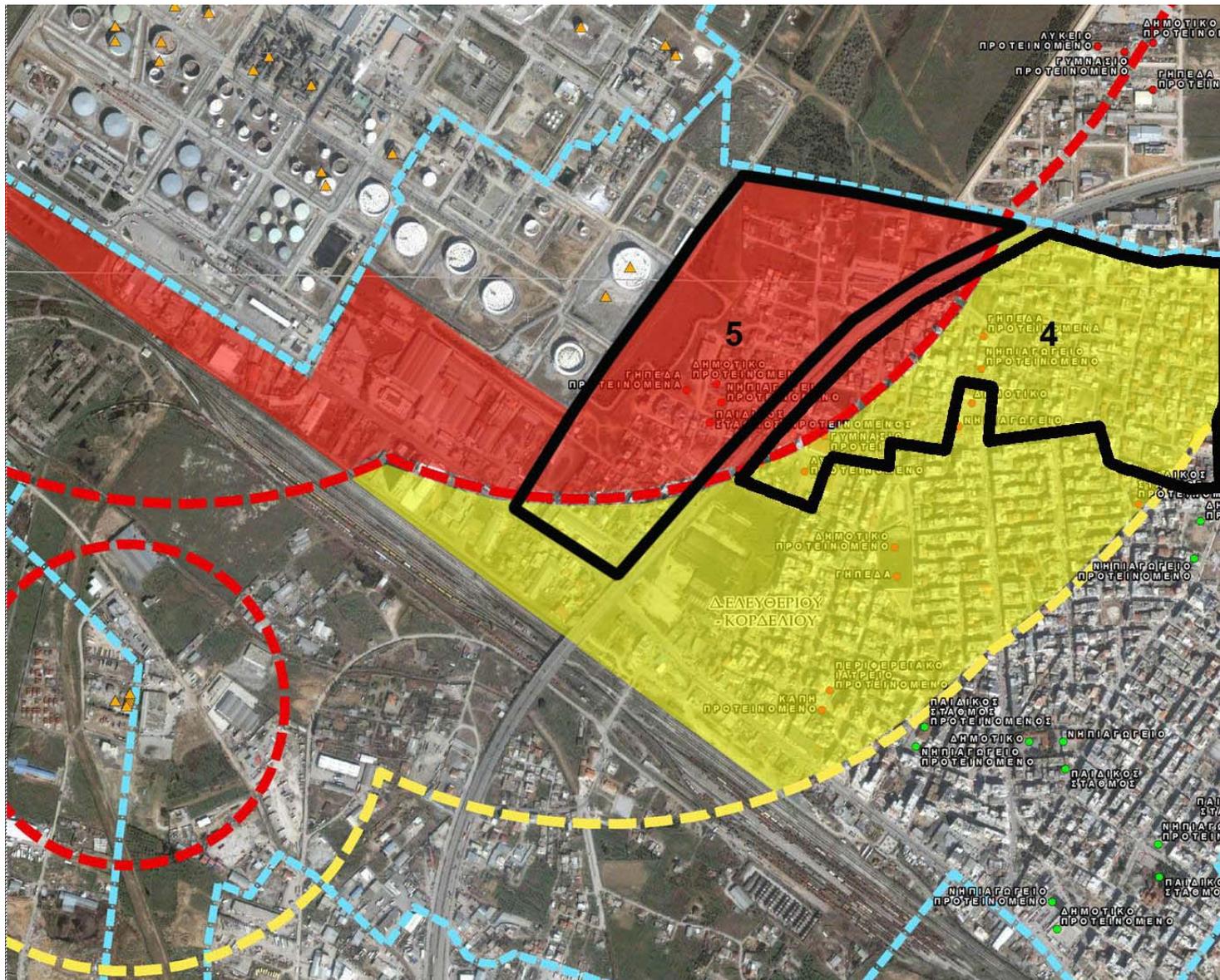
The Urban Units 4 and 5 and the existing land uses



SEVESO Installations – Heavy industry (in mauve), artisan (in lilac), public space – green space (in green), local centers (in red), the rest is housing

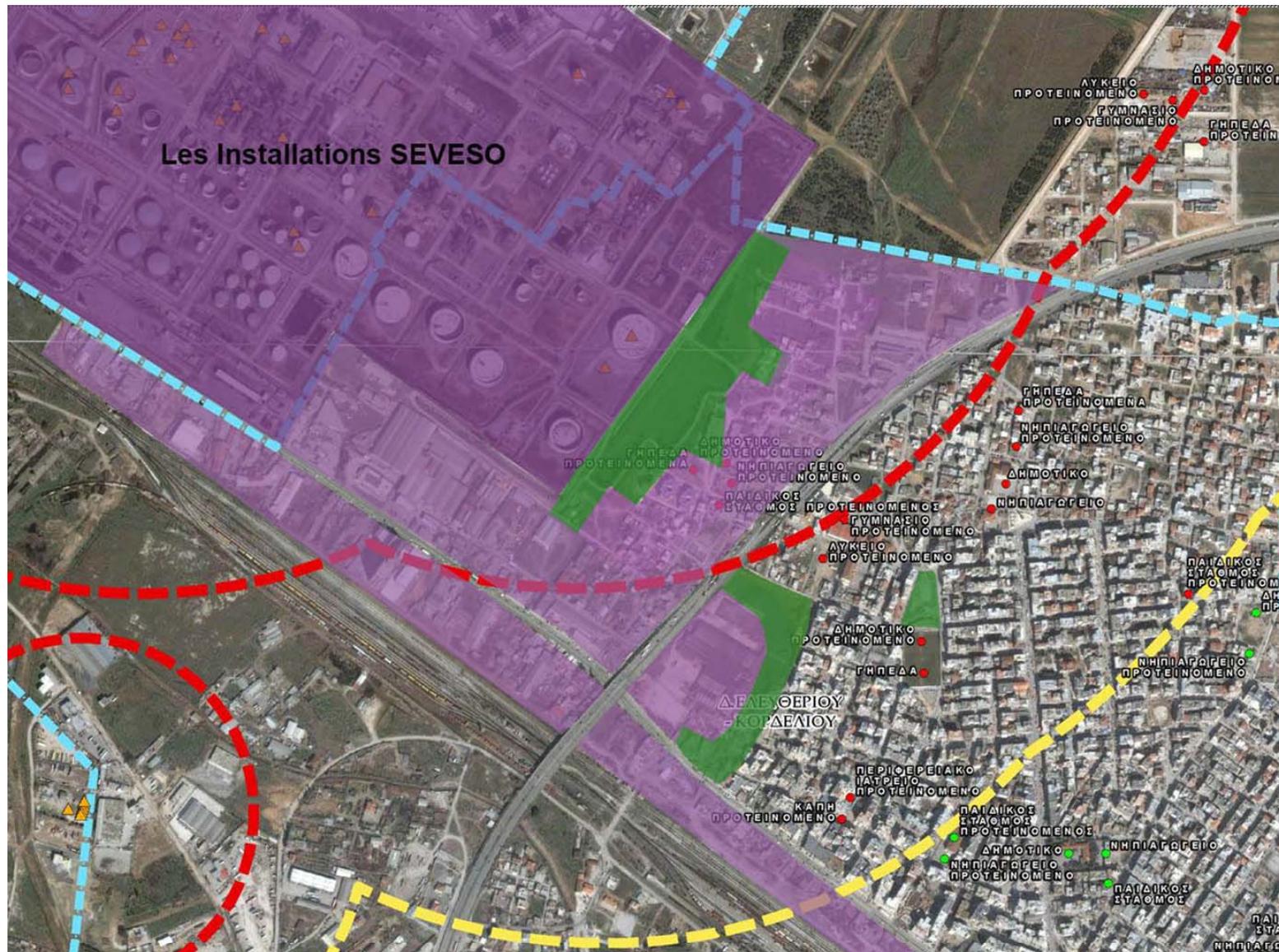
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The Urban Units 4 and 5 of Eleftherio Kordelio, included in the Protection Zones I (red) et II (yellow).



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Proposition of the Urban Regeneration Plan – Protection Zones



SEVESO installations – Heavy industry (in mauve), artisan (in lilac), public space – green space (in green), the rest is housing (mixed housing)

2004	Entreprises - Plans d'Urgence externe (2004)*	s. h. 2008	Entreprises - Directive Seveso II, seuil haut (2008) **	s. b. 2008	Entreprises - Directive Seveso II, seuil bas (2008) **
1	«Agrotechnica» Kekridis SA	1	«Agrotechnica» Kekridis SA		
2	BASF	2	BASF AGRO AE SA		
3	BP HELLAS	3	BP HELLAS	1	BP HELLAS (Dendropotamos)
4	JET OIL SA, (Etablissement à Kalohori)		-		
5	SHELL Gas	4	SHELL Gas		
6	SHELL HELLAS SA (Etablissement à Kalohori)	5	SHELL HELLAS SA (Etablissement à Kalohori)		
7	SYGENTA HELLAS	6	SYGENTA HELLAS		
8	ALPHA fournitures agricoles	7	ALPHA fournitures agricoles		
9	Industrie des Engrais Phosphatés SA (2 Etablissements)				
10	EKO (carburants grecs – huiles, 2 Etablissement)	8	EKO (GPL)	2	EKO (2 Etablissement, Aéroport et Ionia)
11	ELLAGRET	9	ELLAGRET		
12	ELPE SA (pétroles grecs)	10	ELPE SA (polypropylène et carburants)		
13	Eftimiadis	11	Eftimiadis		
14	NITROFARM SA KIRGIDIS SA				
15	PAPAIKONOMOU AGROCHIMIE	12	AGROLOGY PAPAIKONOMOU		
16	PETROGAZ SA	13	PETROGAZ SA		
17	PRIMAGAZ GDL SA (Etablissement à Kordelio)			3	PRIMAGAZ SA
18	FARMA-CHIMIQUE	14	FARMA- CHIMIQUE		
19	YPSILON SA	15	YPSILON SA		
	-	16	VIEKAL SA		
	-	17	VITOUMINA AE SA		
				4	KIRGIAS
				5	AIR LIQUIDE HELLAS SA

*Source: Région Macédoine Centrale, Bureau de Protection Civile.

**Source: Région Macédoine Centrale, Département des Entreprises Industrielles et du Développement

List of SEVESO establishments in the regional unit of Thessaloniki, for which the external emergency plans were developed (2004), and those covered by the Directive SEVESO II (HTL, high threshold and low threshold 2008)

in Komninos, p.262

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Vulnerability Diagram: the protection zones I, II and III



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Conflagration in «JET OIL» in Kalohori, Thessaloniki, on February the 24th of 1986



<http://ecology-salonika.org/2010/02/24/jet-oil-25-years-after/>

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The Major Industrial Accident in «PETROLA» in Athens on September the 1st of 1992 (13 deaths and 15 wounded)



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The proximity of new residential buildings to SEVESO installations



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Risk management is not a fact and it must not be taken for granted

The accident in Sandoz installations in Switzerland (1986).
Rhin Contamination



www.novaquatis.eawag.ch/.../20061101/index_EN

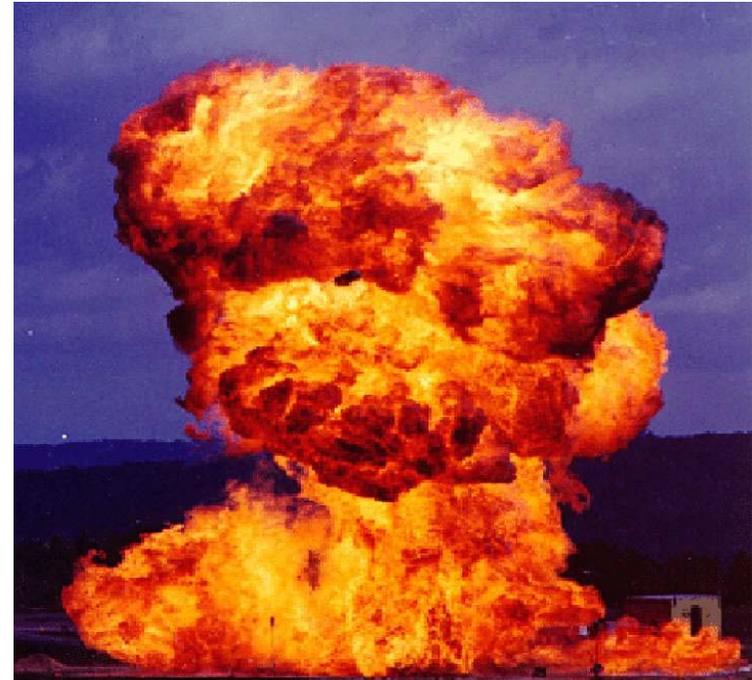
The explosion in Toulouse on
September the 21st of 2001



www.isep.at/medis/Disaster_Image.htm

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Risk management is not a fact and it must not be taken for granted



www.thermdyne.com/brochure.htm

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Conclusions

- The installation of new SEVESO industries or their relocation to an industrial district organized under a modern planning in a sufficient distance from the urban fabric, in a territory selected with criteria that allow the optimal service of the necessary networks and their economic development, does not mean that their vulnerability is fundamentally eliminated.
- Even if dispersion models are used, **no prediction could be made**, concerning where toxic substances will head, nor which the consequences of a leak in the ground and thus underground water and the food chain would be.
- Even more, **the impact** of an industrial accident **in the environment** (fauna, flora, wetlands, coastal areas, protected areas and ecosystems) has not been adequately studied both in short and long-term.
- Risk management is not a fact and it must not be taken for granted.
- **It is finally time for progress to get another form, based on renewable energy and sustainability, while changing the way we design and plan urban space.**

Delta Aliakmon – Loudias – Axios - Gallikos (site NATURA 2000)



<http://history-pages.blogspot.gr/2012/02/11.html>



<http://www.axiosdelta.gr/>

Thank you for your attention

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under the title (Sujet de mémoire): «Le Risque Industriel à Thessaloniki.
Proposition d'un Cadre de Régénération Urbaine Appropriée»