

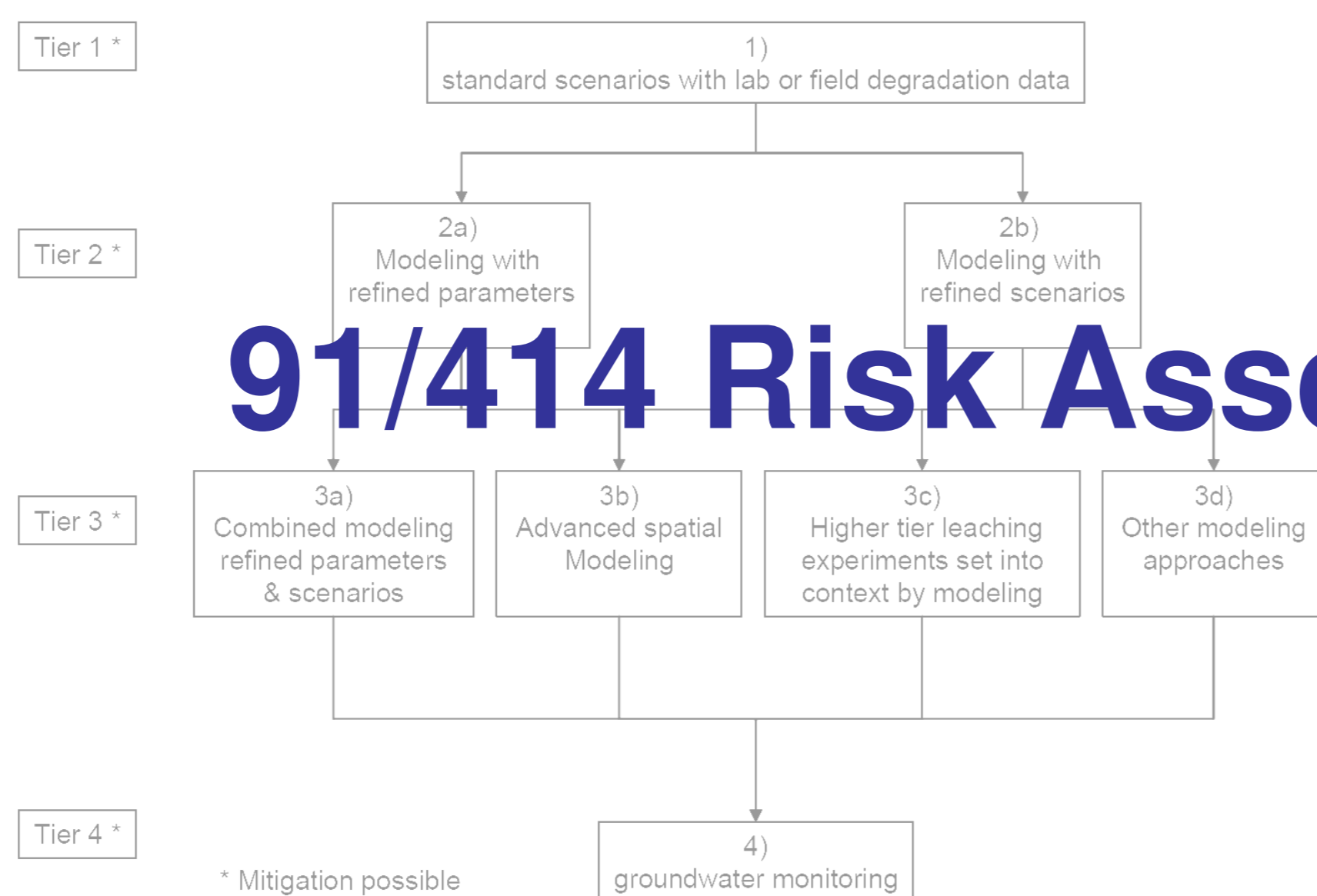
Will the revision of directive 91/414 change the pesticide risk assessment?



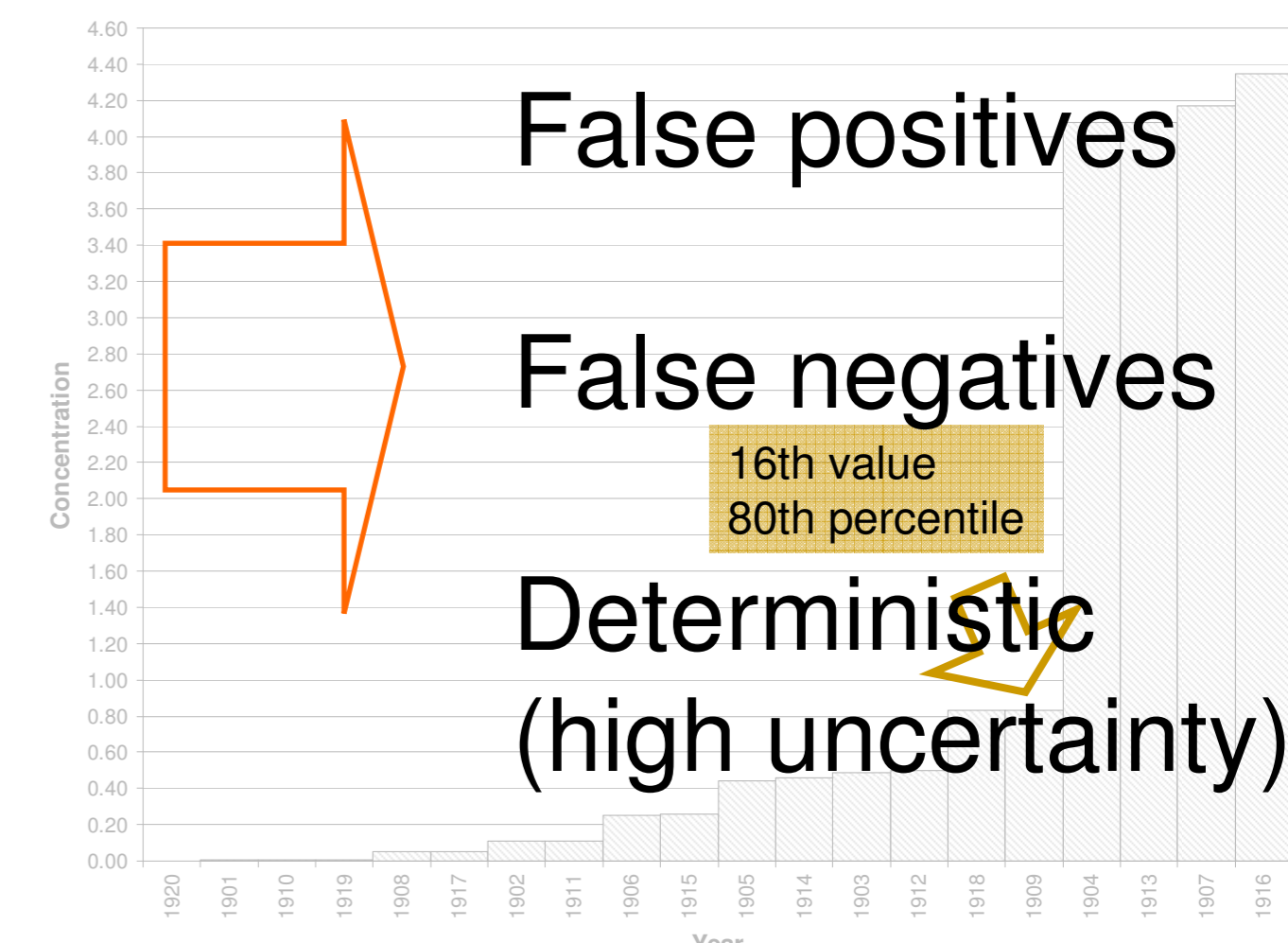
M. Balderacchi
M. Trevisan

Università Cattolica del Sacro Cuore
ICAA sez. Chimica vegetale
Via Emilia Parmense, 84
29100 Piacenza
matteo.balderacchi@unicatt.it

Since the application of Directive 91/414, that regulates pesticide market, only 250 compounds have been authorised to be placed on it; 74% of substances have been removed or have not been approved after review. After almost 20 years, the European Union is revisiting Directive 91/414. The new proposal will increase the level of protection of human and animal health, and of the environment, and in particular will introduce cut-off criteria that may exclude compounds with certain properties from the assessment of their perceived obvious unacceptable risk.



91/414 Risk Assessment

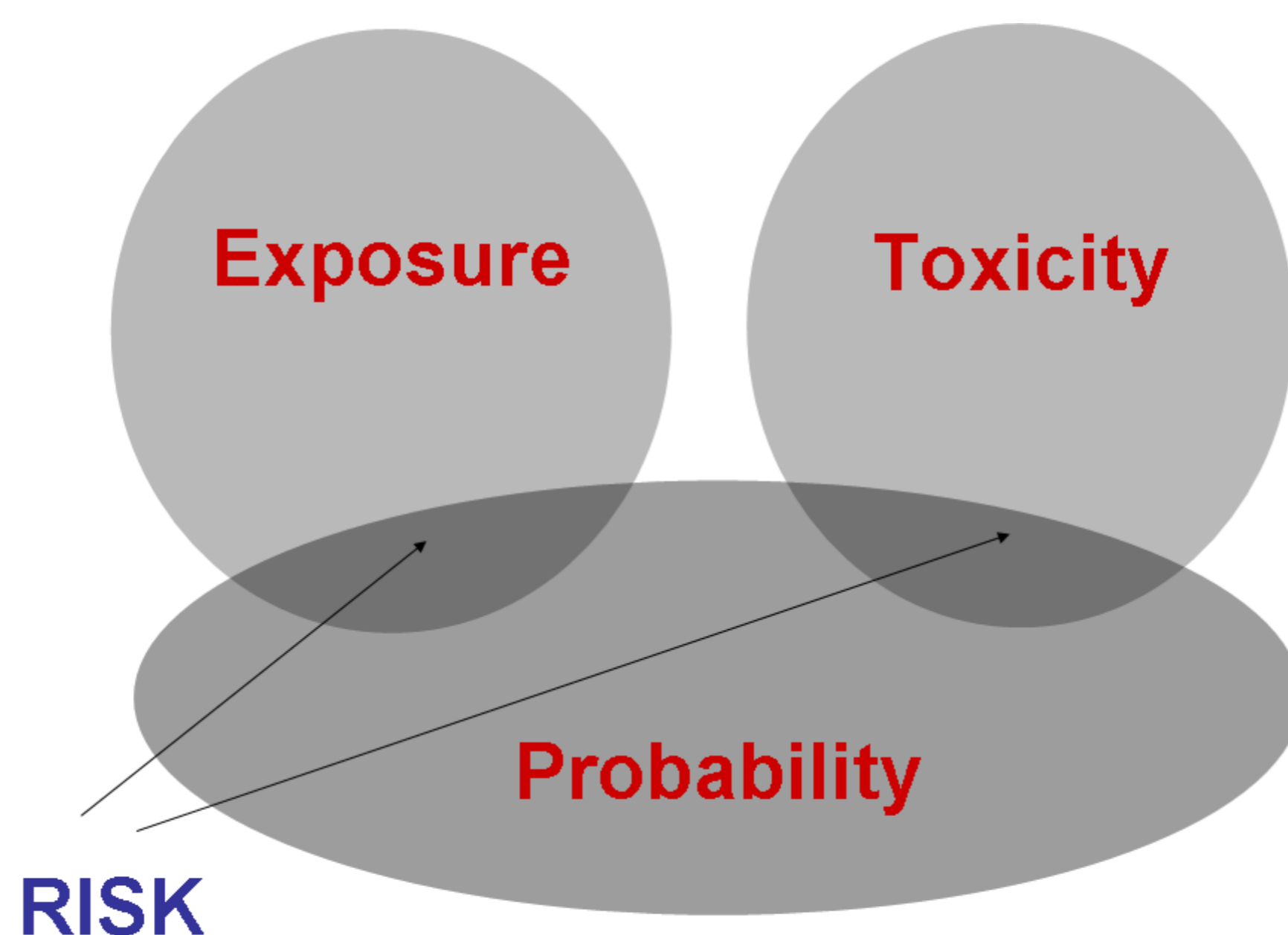
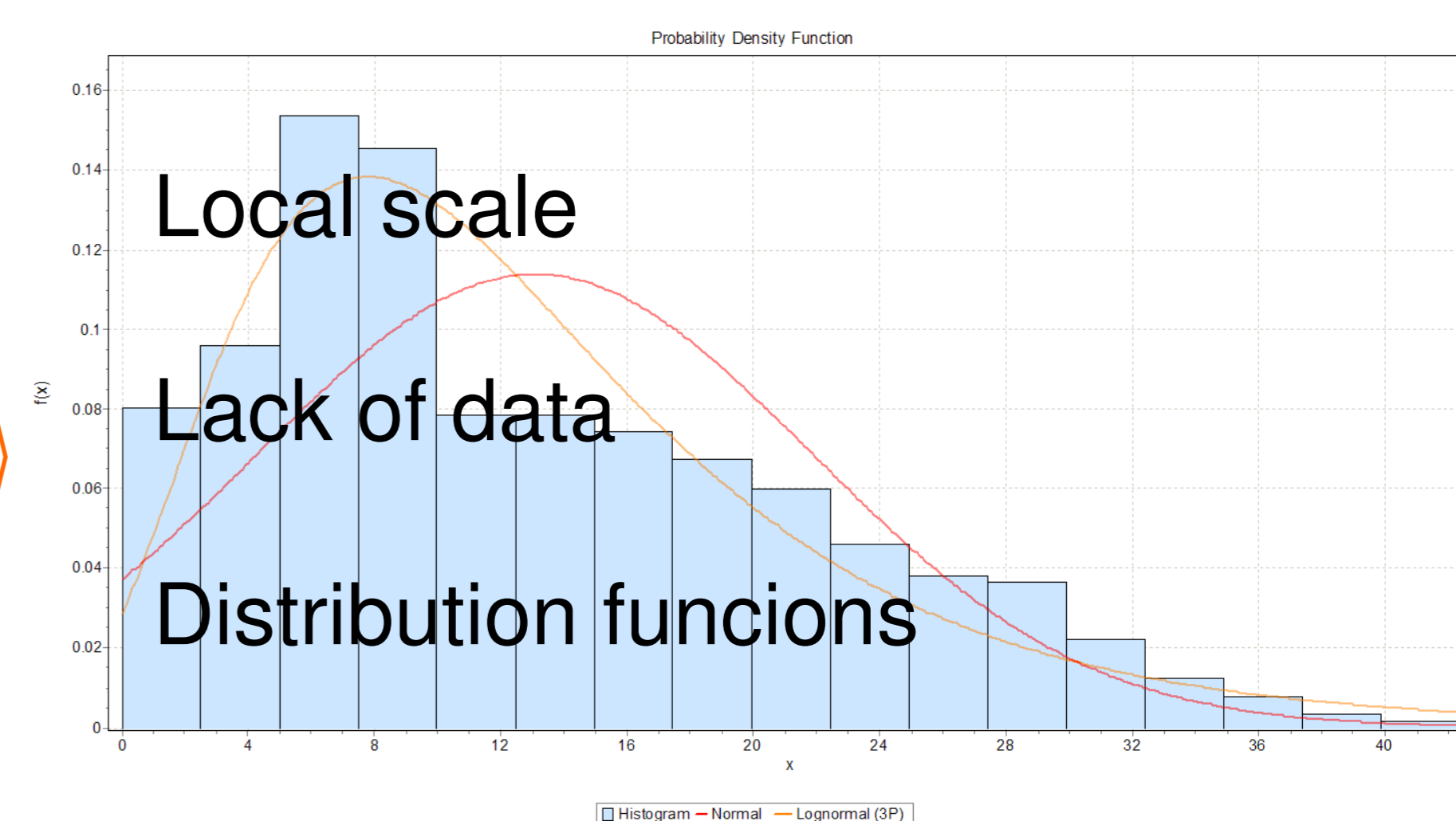


	Annex1 25th perc.	All 25th perc.	Annex1 median	All median	Annex1 75th perc.	All 75th perc.	Annex1 s.d.	All s.d.
Mammals - Acute LD50 (mg/l)	408	300	2000	1820	5000	5000	2294	3210
Fish - Acute LC50 (mg/l)	0.6	0.4	3.7	3.3	100.0	40.0	478	725
Daphnia - Acute EC50 (mg/l)	0.2	0.1	3.6	2.7	60.4	30.9	150	380
Algae - Acute EC50 (mg/l)	0.1	0.1	1.2	1.3	9.7	10.0	333	355
Soil DT50 typical (days)	6	7	15	23	37	58	261	4117
Koc (ml/g)	76	100	380	502	2000	3015	4180728	2295478
Water Solubility (mg/l)	3.5	1.5	63.8	30	2637.5	945	32267740	16136427

91/414 Revision

- Limited Number of compounds
- Pest resistance development
- Loss of sensitivity in modelling
- Marginal crops

Probabilistic Risk Assessment (?)



Example of pesticide risk assessment approach

- Proposed phases: (EIA approach)
1. Screening
 2. Scoping
 3. Impact Assessment
 4. Mitigation
 5. Monitoring