Data requirement on environmental toxicology for the registration of pesticides in Ethiopia

No	Data requirement	Data required	Data type	Test substance T= technical active ingredient B= Formulated product
1	**Environmental chemistry**			
1.1	Physical and chemical characteristics	Vapour pressure at 20/25 C^0 Pa	End point	T
		Volatality Pa-M^3/mol	End point	T
		Hydrolysis DT 50 of a.i (days)- Specify temp and PH	End point	T
		Photolysis DT 5O in days	End point	T

Data requirement on environmental toxicology for the registration of pesticides in Ethiopia (Cont..)

No	Data requirement	Data required	Data type	Test substance
1	**Environmental chemistry (cont..)**			
1.1	Physical and chemical characteristics	Solubility in water g/l	End point	T and F
		N-octanal/water partition cofficient Log P (Kow)	End point	T
		Hydrolysis DT 50 of a.i (days)- Specify temp and PH	End point	T
		Method of analysis	Detailed study report	T and F

Data requirement on environmental toxicology for the registration of pesticides in Ethiopia (Cont..)

No	Data requirement	Data required	Data type	Test substance
2	**Ecotoxicology**			
2.1	**Effects on various organisms**			
	Birds (2 species) e.g Malard duck Bobwhite quail	Acute toxicity LD_{50} in mg/kg bw	Detailed study report	T
		NOEL mg/kg bw/day	Detailed study report	T
		Reproduction toxicity NOEC in mg/kg food	Detailed study report *For 1 species??* *Yes*	T

Data requirement on environmental toxicology for the registration of pesticides in Ethiopia (Cont..)

No	Data requirement	Data required	Data type	Test substance
2	**Ecotoxicology (cont)**			
1.1	**Effects on various organisms**			
	Fish (2 species) e.g Rainbow trout, Carp	Acute toxicity LC_{50} in mg/L bw	Detailed study report	T
		NOEC Mg/L	Detailed study report	T
		Reproduction toxicity (life cycle) NOEC in mg/l	Detailed study report	T
		Bioconcentration Factor in tissue	Detailed study report	T

Data requirement on environmental toxicology for the registration of pesticides in Ethiopia (Cont..)

No	Data requirement	Data required	Data type	Test substance
2	**Ecotoxicology (cont)**			
2.1	**Effects on various organisms**			
	Daphnia	Acute toxicity LC_{50} in mg/l	Detailed study report	T
		Chronic toxicity NOEC mg/L	Detailed study report	T
	Algae	Acute toxicity LC_{50} mg/l	Detailed study report	T
		Chronic toxicity NOEC in mg/l	Detailed study report	T

Data requirement on environmental toxicology for the registration of pesticides in Ethiopia (Cont..)

No	Data requirement	Data required	Data type	Test substance
2	**Ecotoxicology (cont)**			
2.1	**Effects on various organisms**			
	Bees	Acute toxicity LD_{50} in µg/ bee	Study report *oral as well as contact!*	T
		Chronic toxicity NOEC mg/kg food	Study report	T
	Algae	Acute toxicity LC_{50} mg/l	Study report	T
	Earthworms	Acute toxicity LC_{50}mg/kg	Study report	T
	Soil microorganisms	Chronic toxicity NOEC mg/kg	Study report	T

Missing data ecotoxicology

- Aquatic insect species for compounds with an insecticidal mode of action
- Aquatic macrophytes for compounds with an herbicidal mode of action
- (Sediment dwelling organisms)
- Non-target arthropods for compounds with an insecticidal mode of action
- Chronic earthworm study
- Non-target terrestrial plants for compounds with an herbicidal mode of action

Data requirement on environmental toxicology for the registration of pesticides in Ethiopia (Cont..)

No	Data requirement	Data required	Data type	Test substance
3	**Fate and behavior in the environment**			
3.1	**Behaviour,ways of degradation,degradation products in soil**			
a	Major metabolites	Degradation path in the soil, degradation products formed	Study report	T
	Persistence *(for a.i. as well as major metabolites)*	DT_{50} in days in soil	Study report *Representative soils!*	T
	Mobility *(a.i. as well as major metabolites)*	•Degree of mobility •Leaching potential •Possibility ground water contamination	Study report	T
	Adsorption *(a.i. as well as major metabolites)*	Degree of adsorption In KOC or KOM	Study report *Representative soils; also*	T

Data requirement on environmental toxicology for the registration of pesticides in Ethiopia (Cont..)

No	Data requirement	Data required	Data type	Test substance
3	**Fate and behavior in the environment**			
3.1	**Behaviour,ways of degrgradation,degradation products in water**		End point	T and F
a	Major metabolites	Degredation path in the water, breakdown products formed	Study report	T
	Persistence *(a.i. as well as major metabolites)*	DT_{50} in days in surface water and water *(or sediment??)*	Study report	T
4	**Mode of action**	Description of mode of action	Study report	T

Data requirement on environmental toxicology for the registration of pesticides in Ethiopia (Cont..)

No	Data requirement	Data required	Data type	Test substance
5	**Residue in the plant**			
5.1	**Metabolism and major metabolites**	Description on the principle of metabolization and major metabolites formed	Study report	T
5.2	Behaviour of residues	Persistence of metabolites in the plant DT50 in days	Study report	T and F
5.3	MRL codex	If available PPM	End value	T
5.4	**MRL country**	If available PPM	End value	T
6	**Analytical methods on residue**	Method of residue analysis	Study report	T

Evaluation of data

Criteria:

- According to existing guidelines
- According to GLP
- Results may be compared with already existing data from a data base (e.g. Footprint)
  - if comparable, then OK
  - if deviant, then study may be questionable

Thank you