

Results from the Environmental Endpoints

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Outline

1. Overview of Environmental (ENV) Endpoint Decisions
2. Detailed Results
 - Bioaccumulation
3. Main Results
 - Degradation (Biotic and Abiotic)
 - Aquatic Toxicity
 - Environmental Exposure
4. Summary of ENV Decision Categories
5. General Concerns Identified

1. Overview of ENV Endpoint Decisions

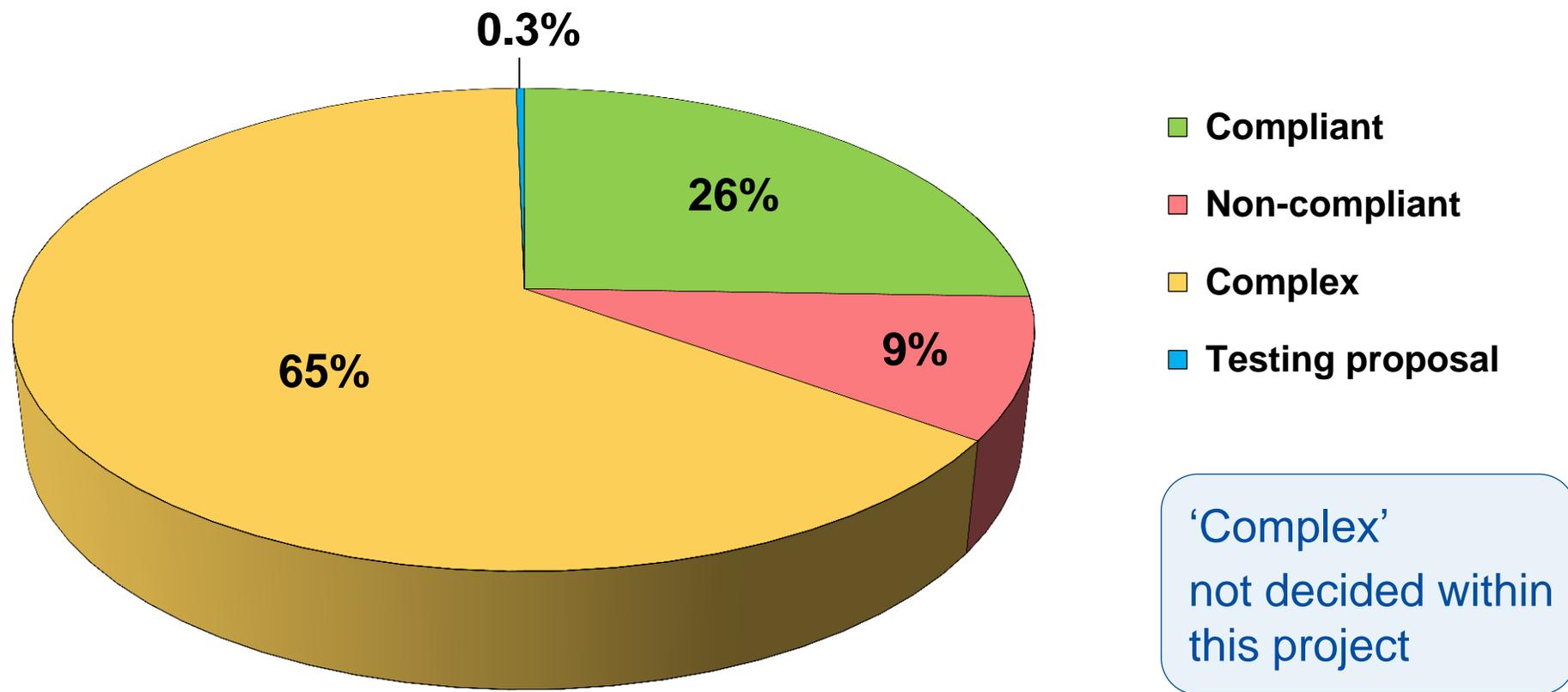


Figure 1: Overall distribution of environmental endpoint decisions (n = 9070) subdivided in four categories

➤ What is behind this distribution?

1. Overview of ENV Endpoint Decisions

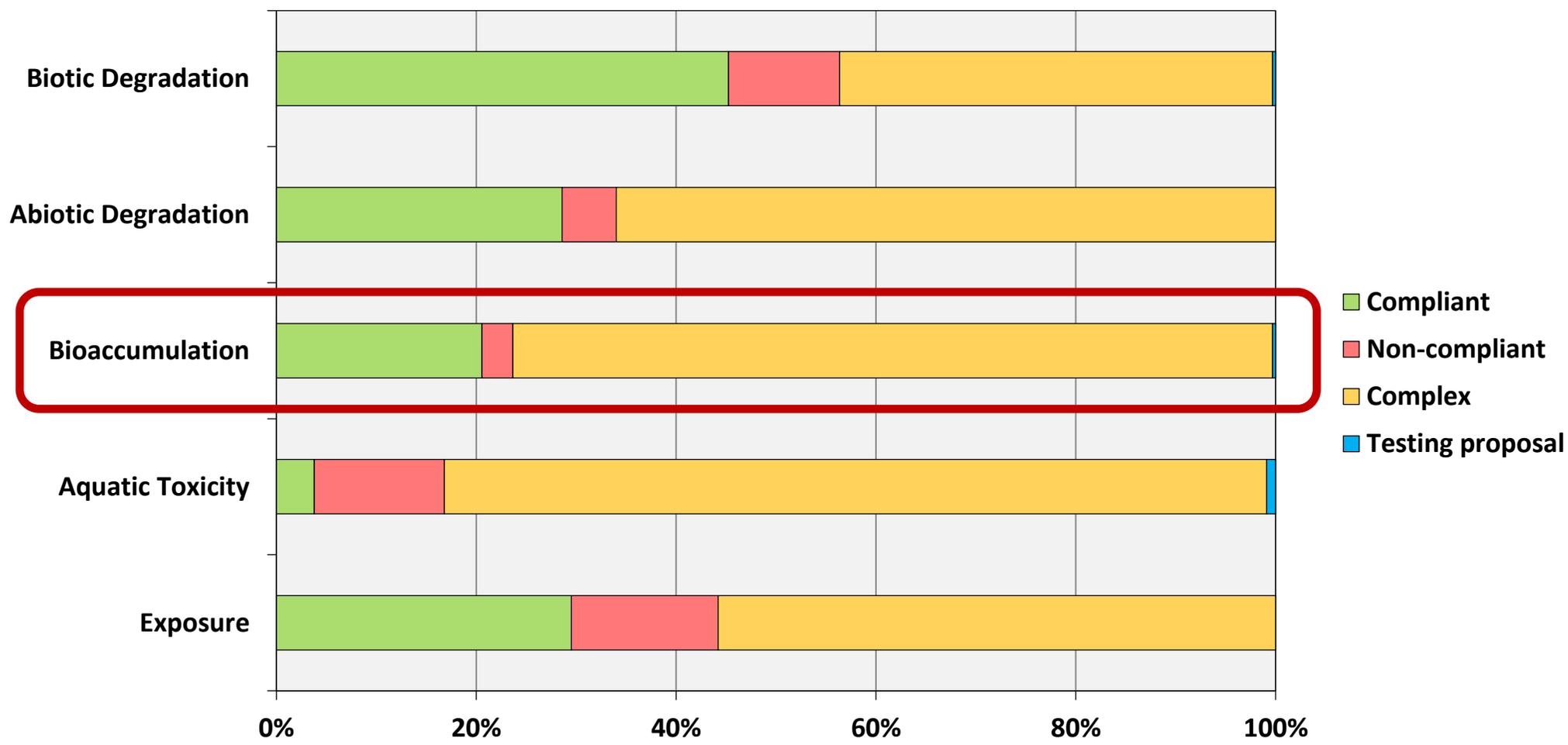


Figure 2: Endpoint-specific distribution of the decision categories

Ranges of decision categories:

'Compliant'	4 – 45%	'Complex'	43 – 82%
'Non-compliant'	3 – 15%	'Testing proposal'	< 1%

2. Detailed Results – Bioaccumulation

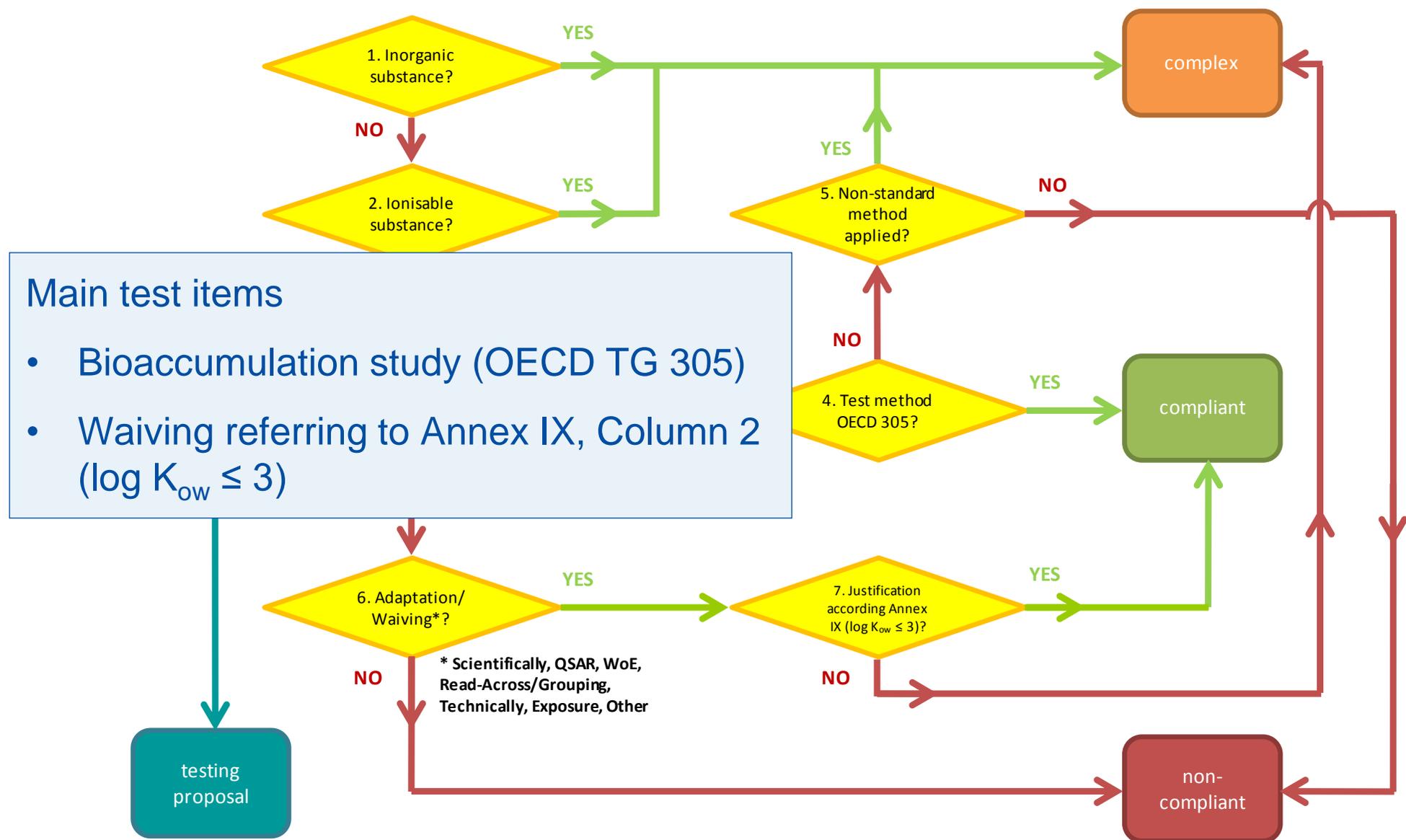


Figure 3: Decision tree bioaccumulation

2. Detailed Results – Bioaccumulation

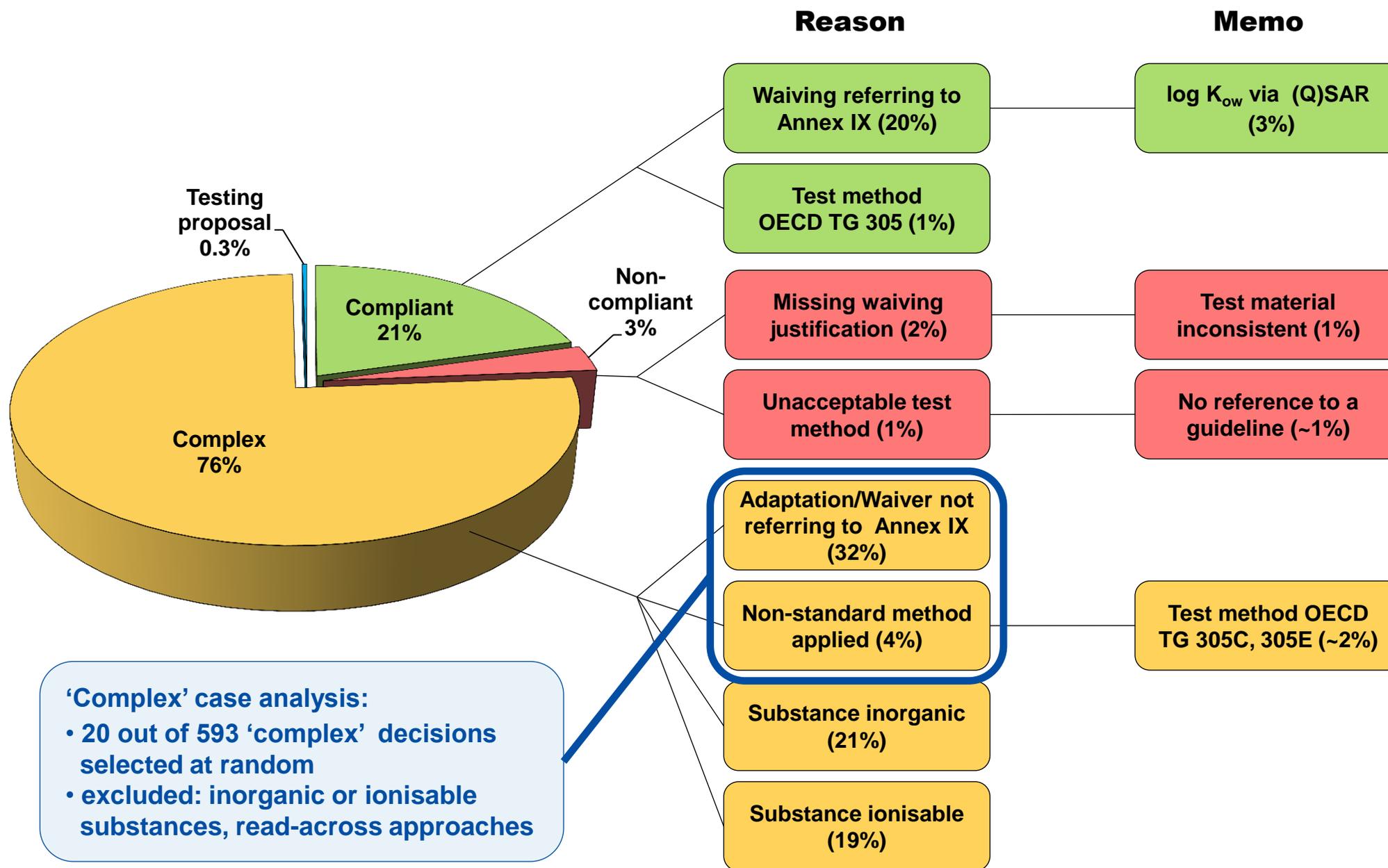


Figure 4: Results from the screening procedure of bioaccumulation (1814 dossiers)

2. Detailed Results – Bioaccumulation

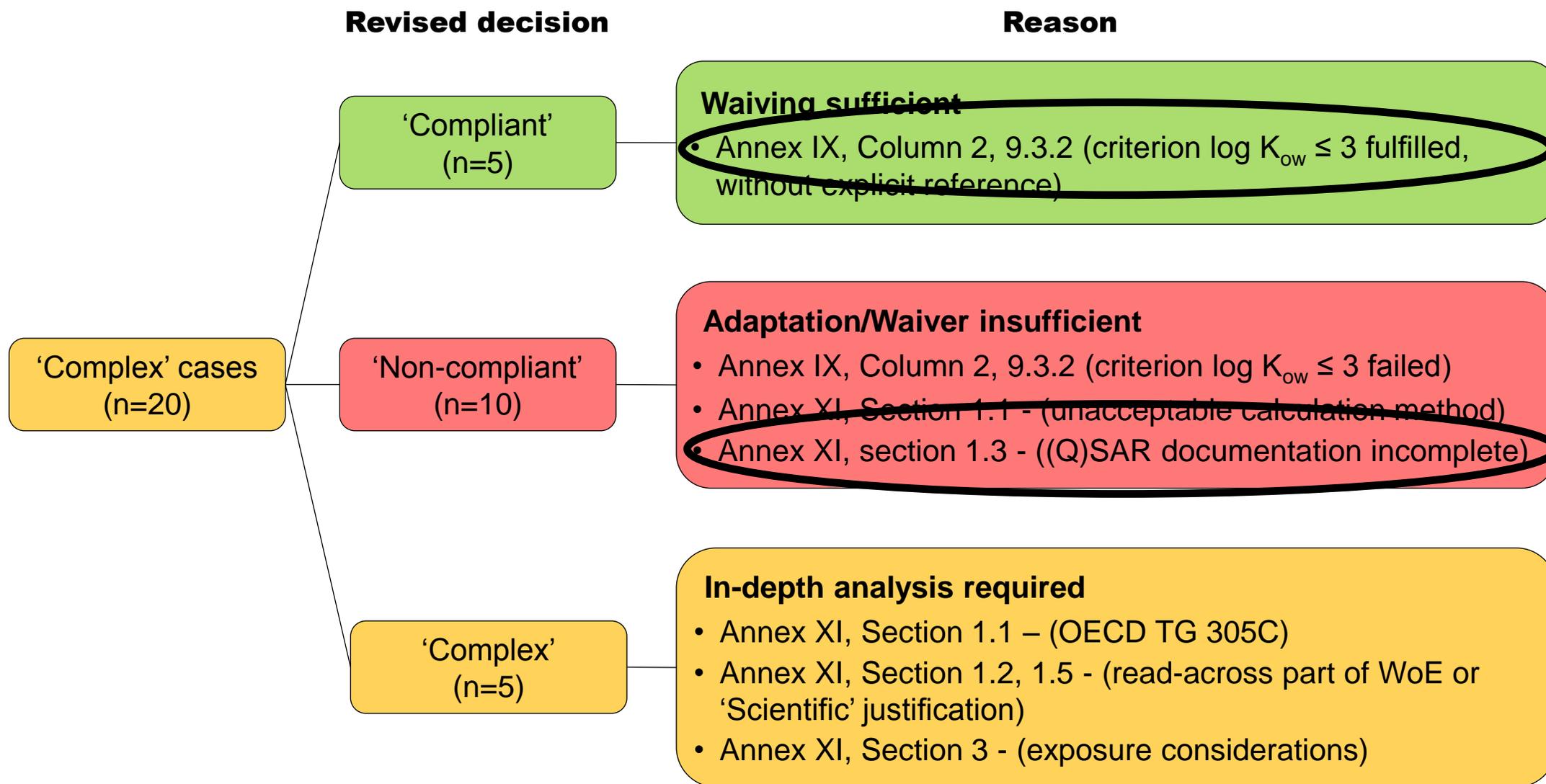


Figure 5: Detailed analysis of 20 'complex' cases from bioaccumulation

➤ 'Complex' case analysis identified tendencies, but was not representative

3a. Main Results – Biotic Degradation

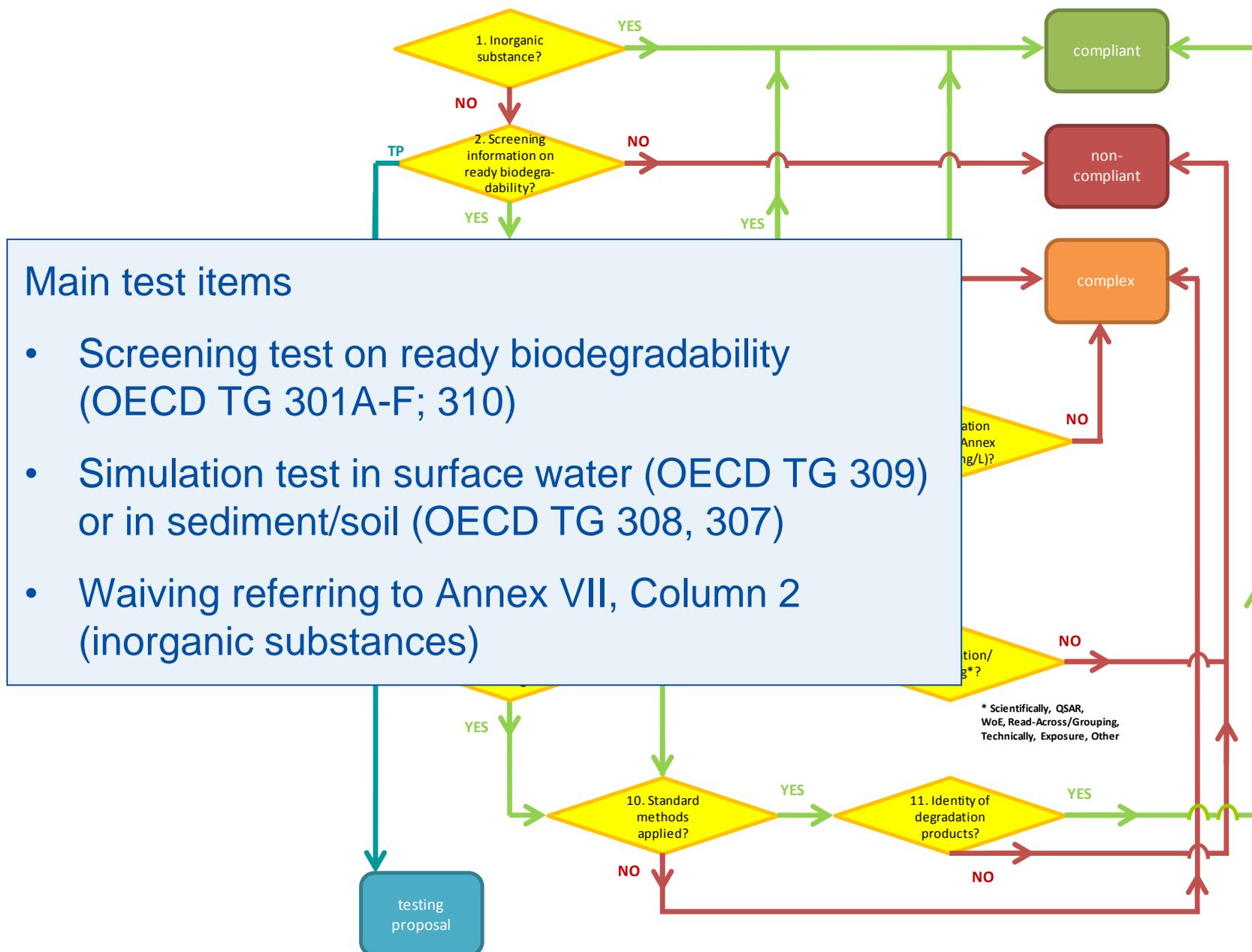


Figure 6: Decision tree biotic degradation

3a. Main Results – Biotic Degradation

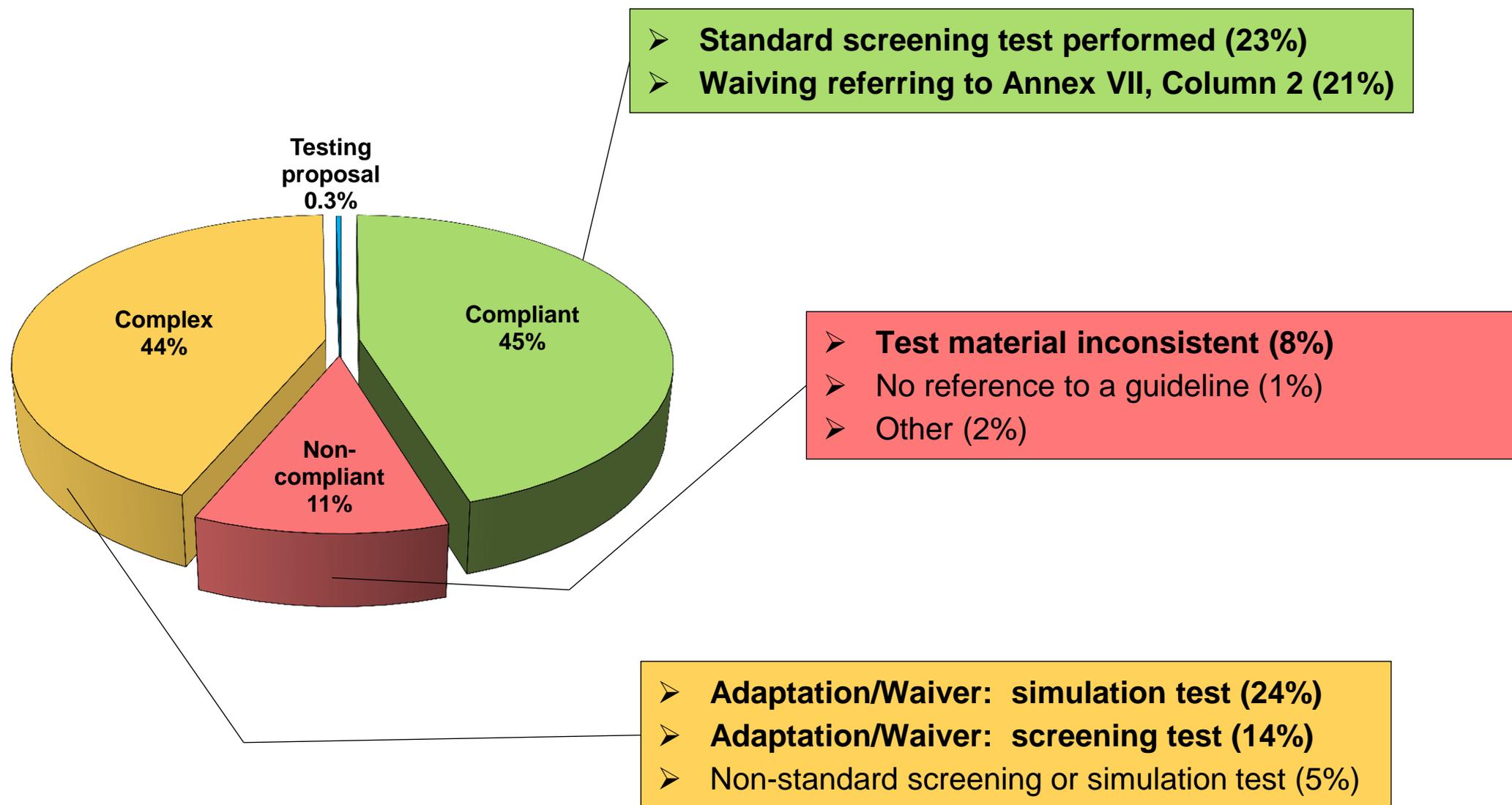


Figure 7: Endpoint decisions from biotic degradation (1814 dossiers)

3b. Main Results – Abiotic Degradation

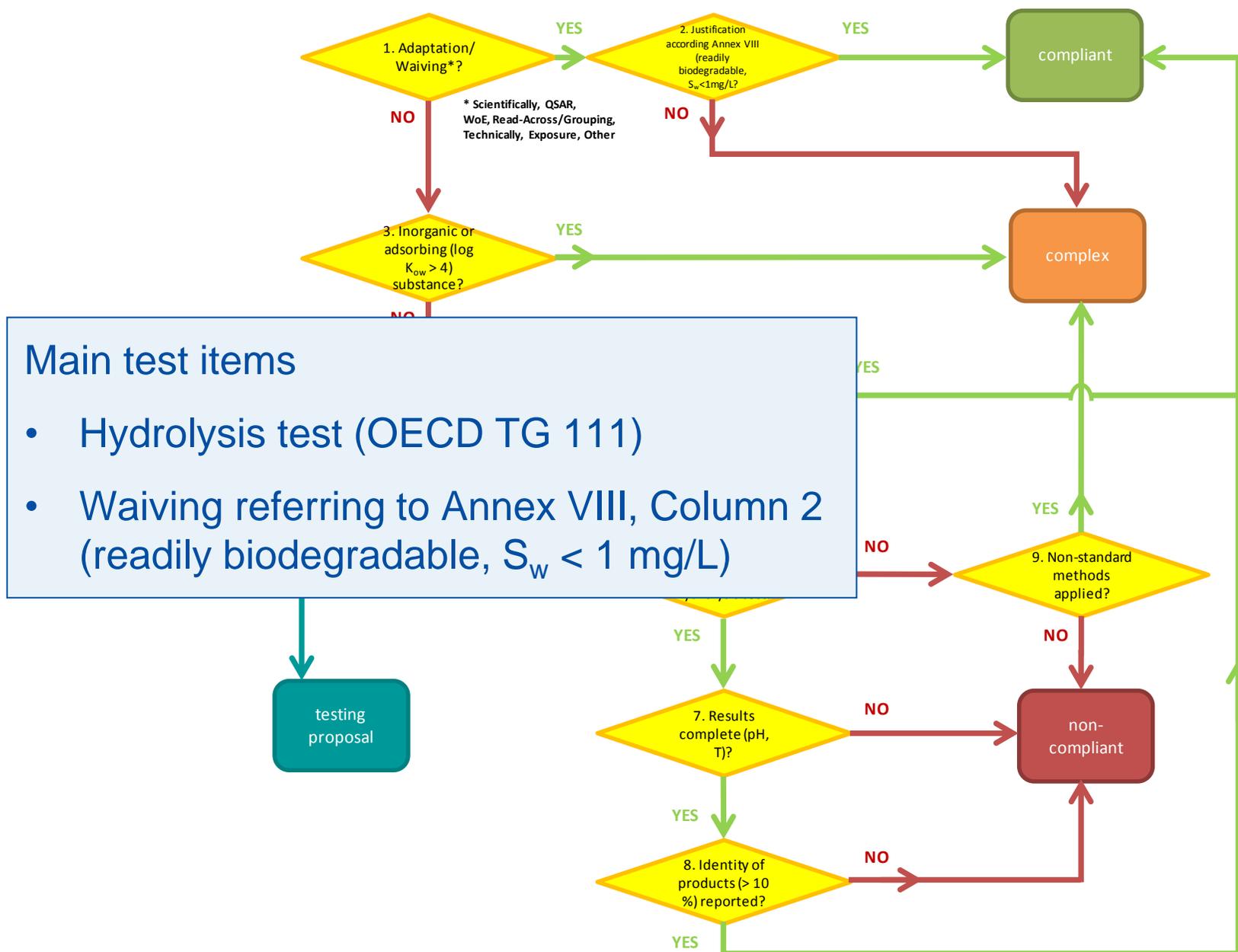


Figure 8: Decision tree abiotic degradation

3b. Main Results – Abiotic Degradation

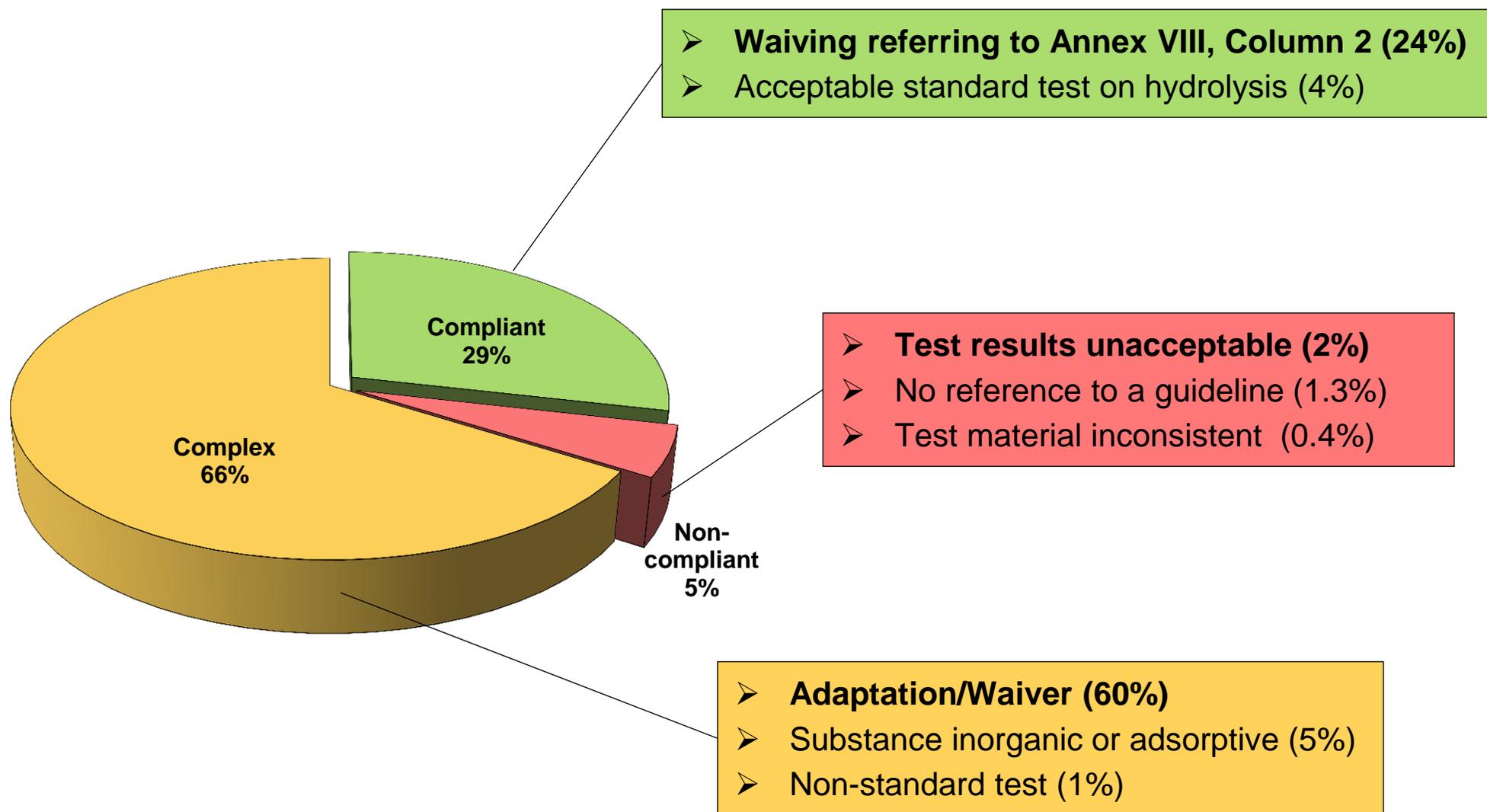
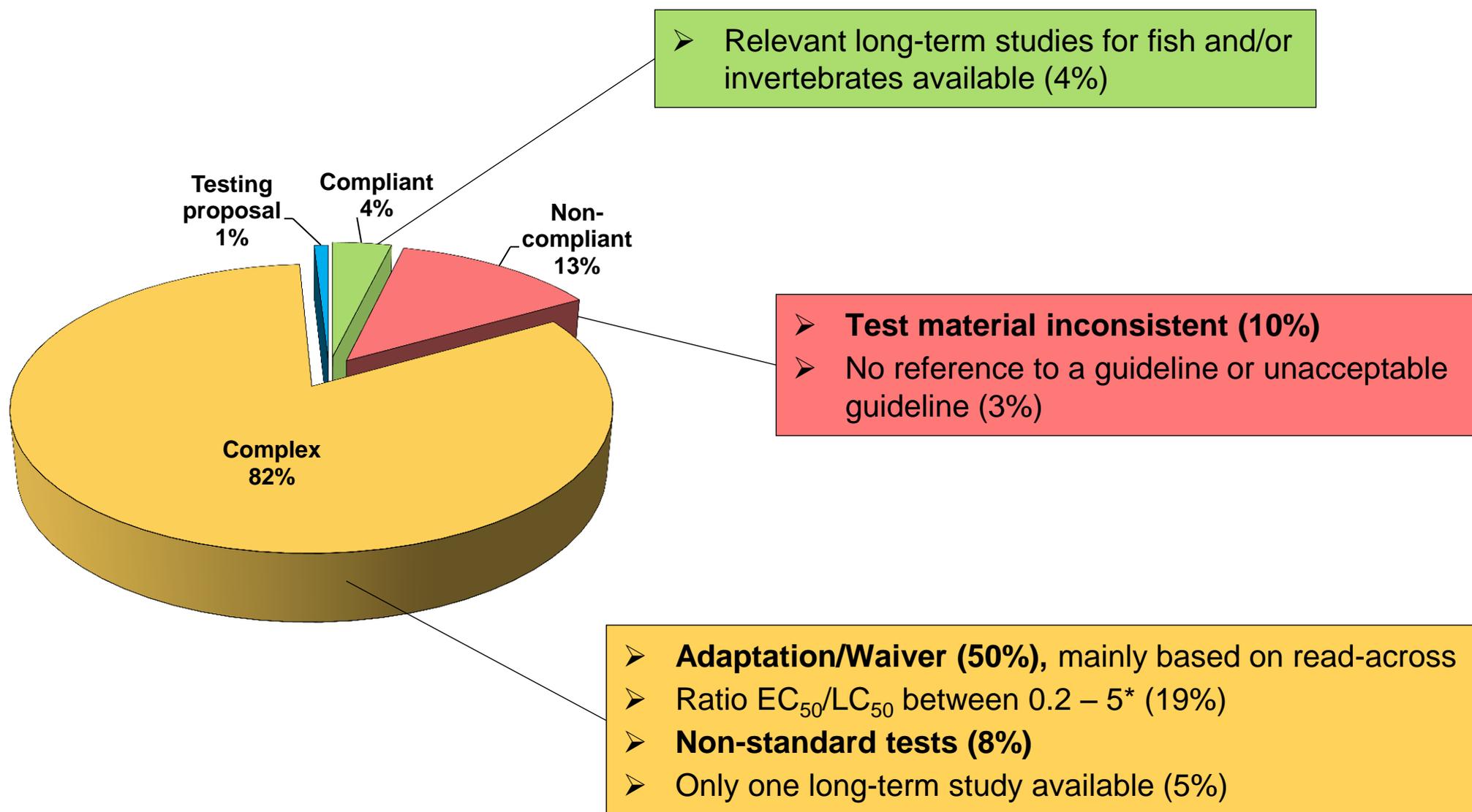


Figure 9: Endpoint decisions from abiotic degradation (1814 dossiers)

3c. Main Results – Aquatic Toxicity



* Values adopted by the UBA based on the report 'Comparison of species sensitivities of daphnia and fish in acute and chronic testing', UBA 2015 (in prep.)

Figure 11: Endpoint decisions from aquatic toxicity (1814 dossiers)

3d. Main Results – Environmental Exposure

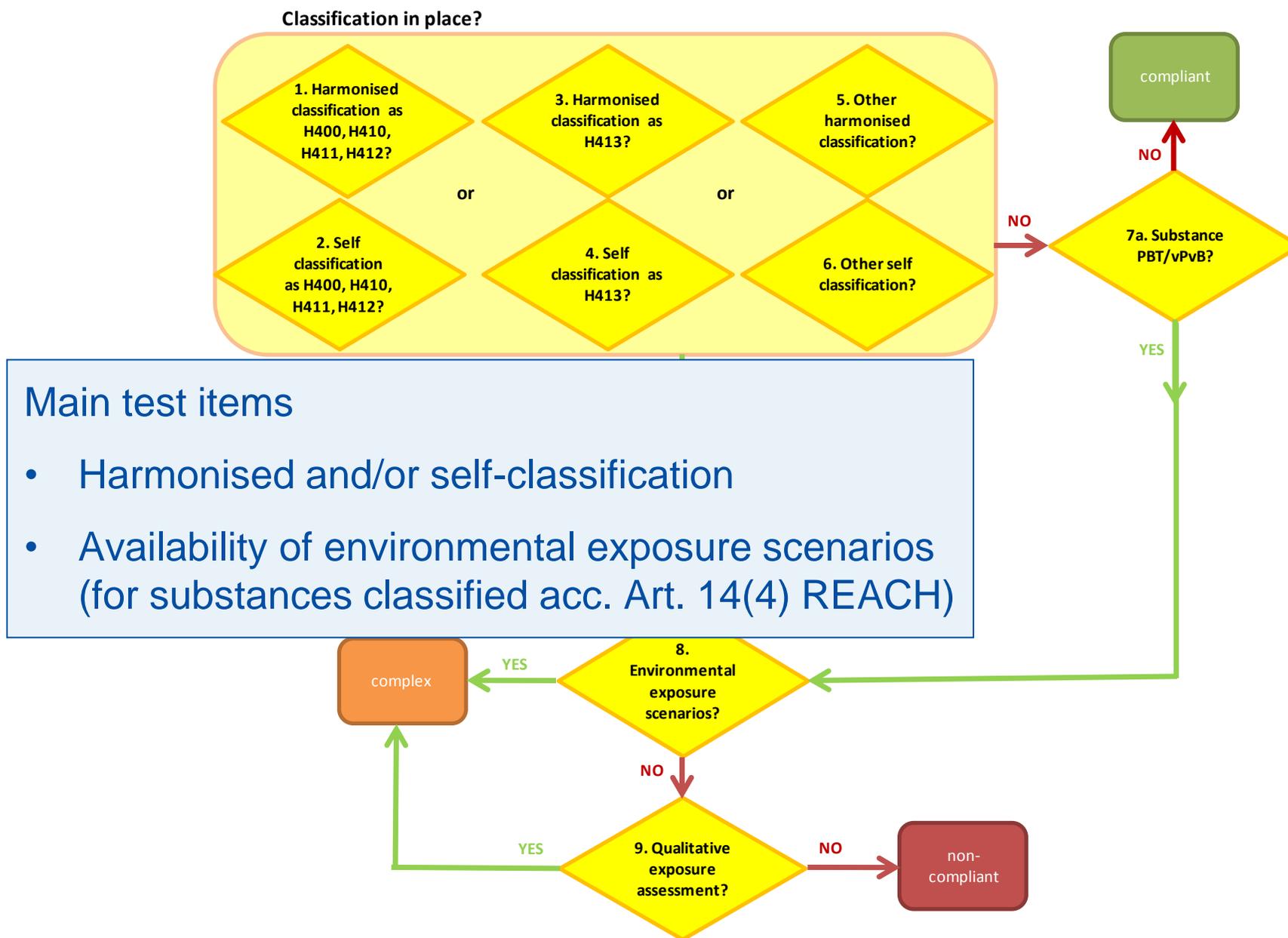


Figure 12: Decision tree environmental exposure

3d. Main Results – Environmental Exposure

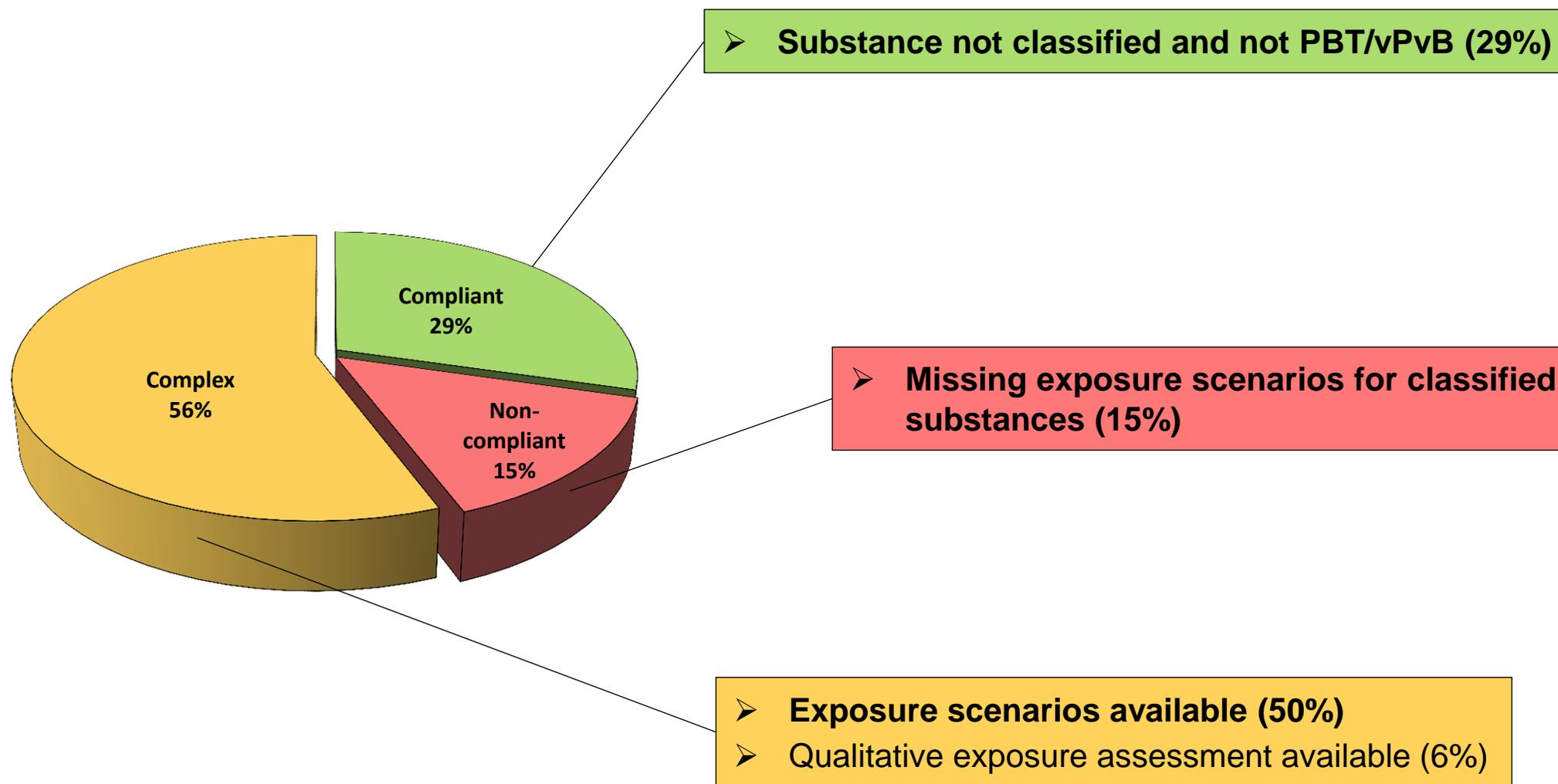


Figure 13: Endpoint decisions from environmental exposure (1814 dossiers)

4. Summary of 'Compliant' ENV Decisions

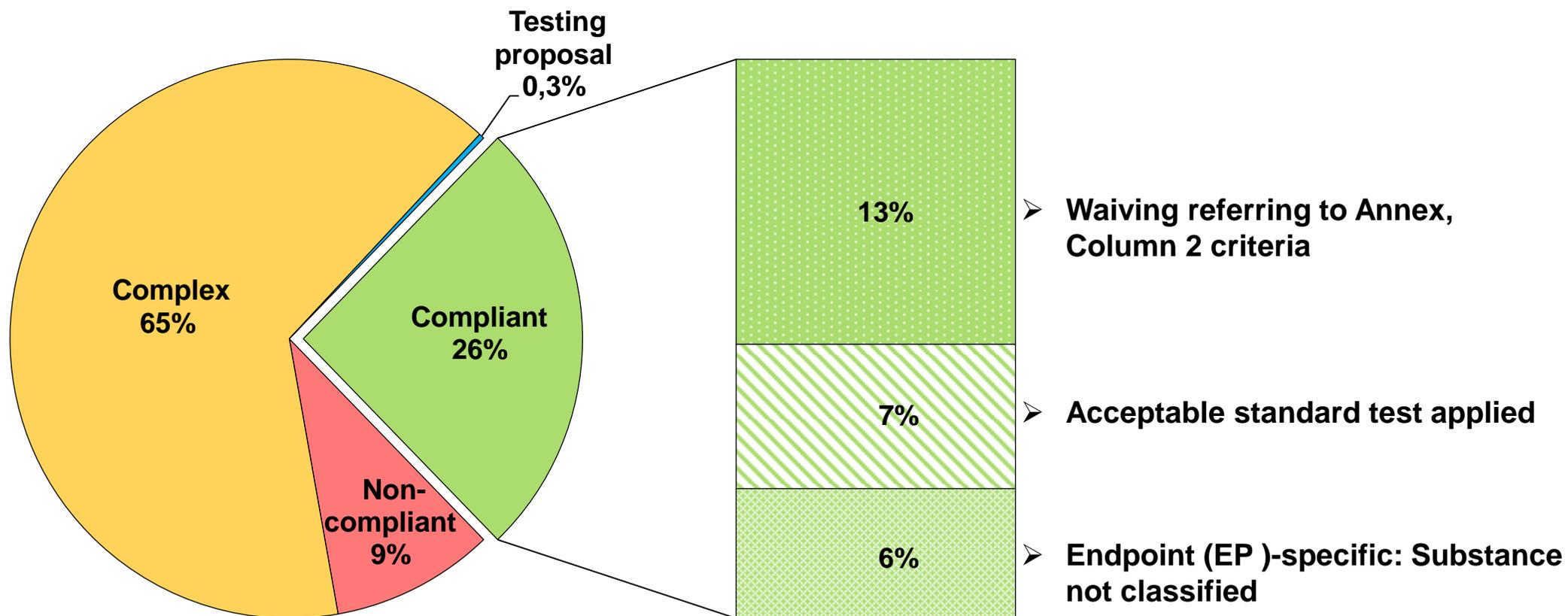


Figure 14: Summarised reasons why ENV endpoint decisions were 'compliant'

- 'Compliant' decisions mainly based on specific waiving rules

4. Summary of 'Non-Compliant' ENV Decisions

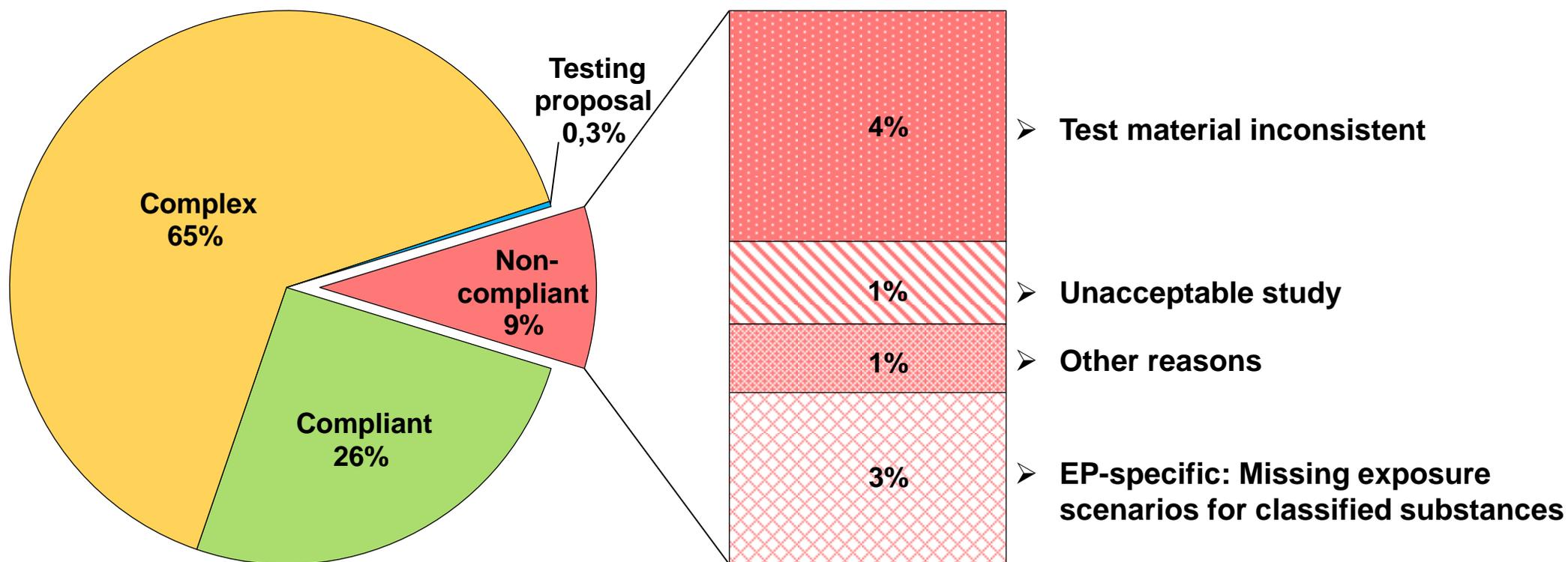


Figure 15: Summarised reasons why ENV endpoint decisions were 'non-compliant'

- 'Non-compliant' cases mainly based on inconsistent test material

4. Summary of 'Complex' ENV Decisions

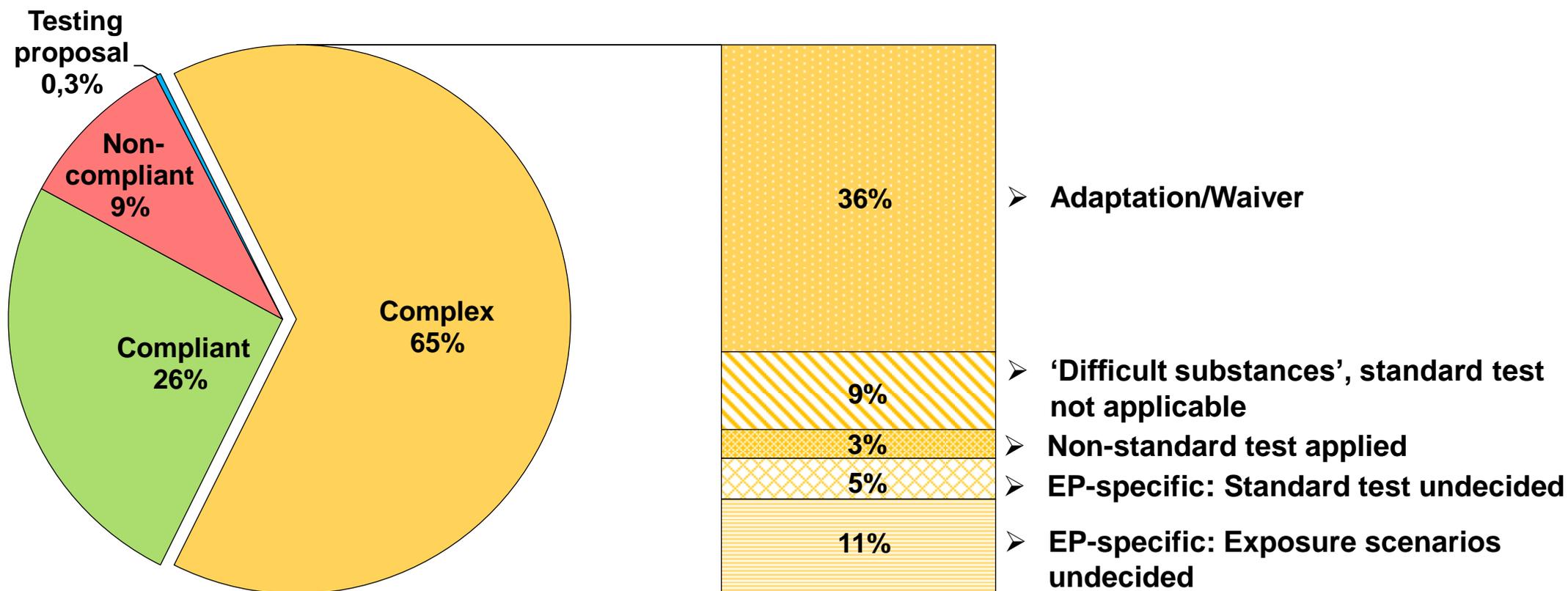
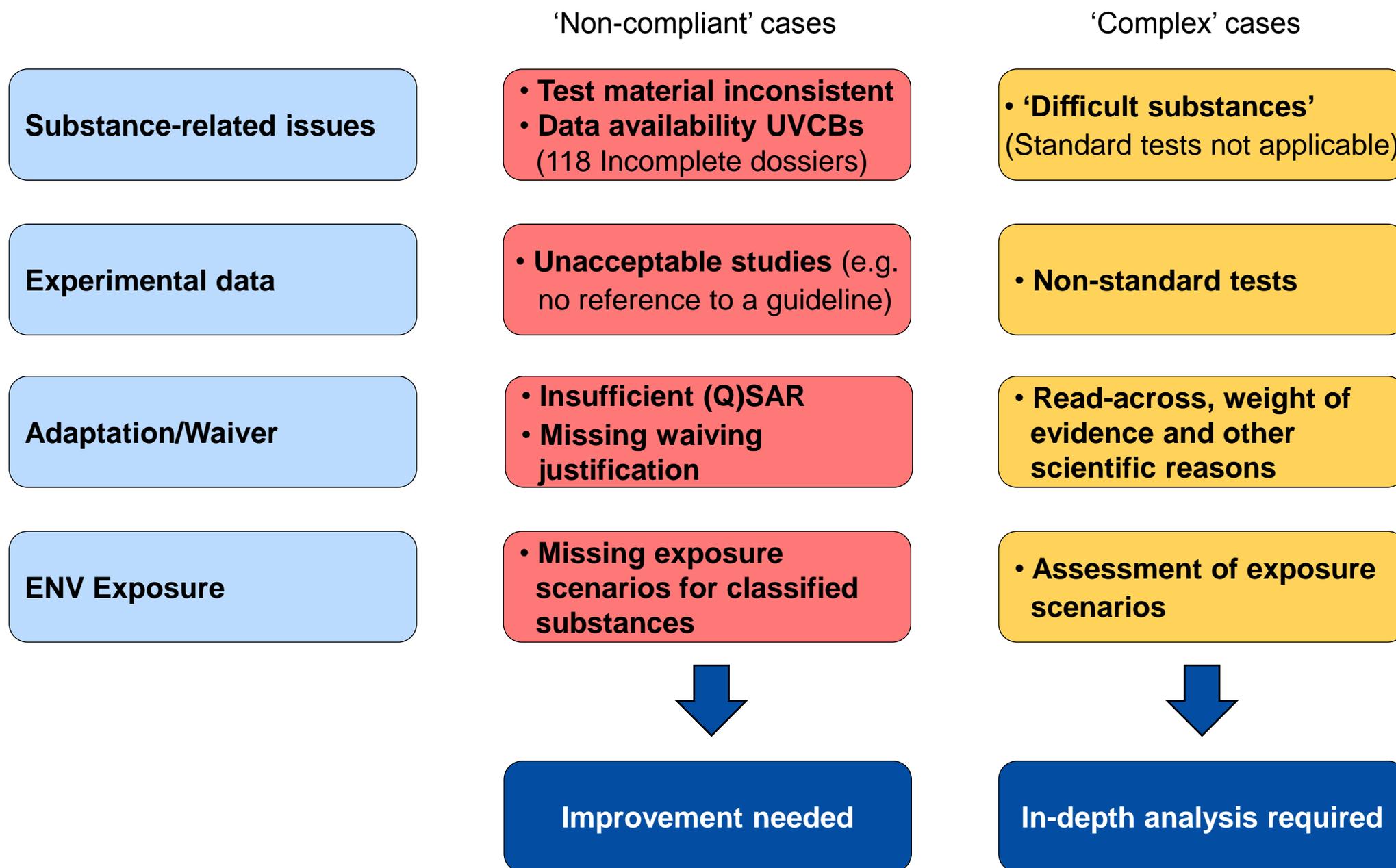


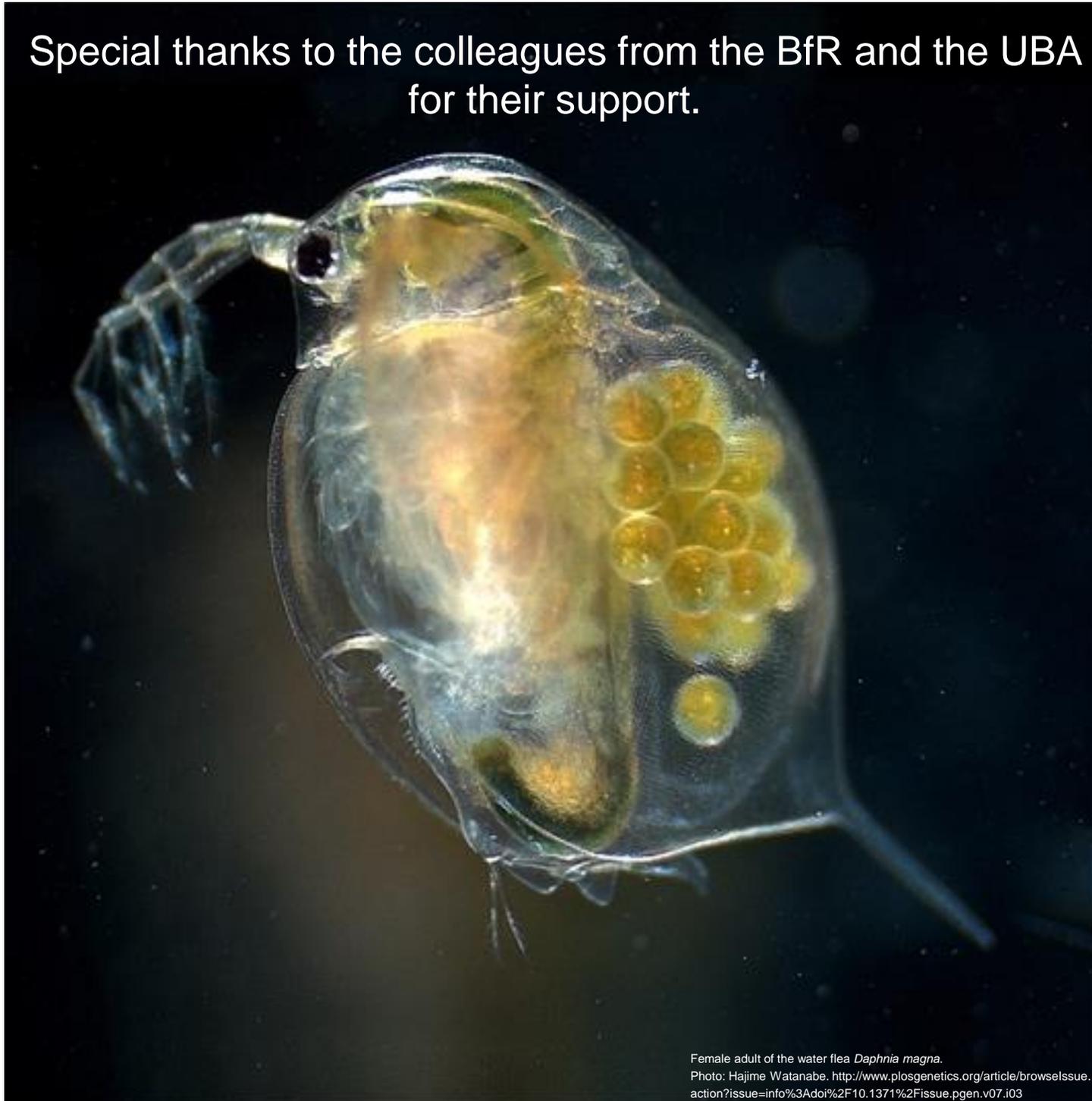
Figure 16: Summarised reasons why ENV endpoint decisions were 'complex'

- 'Complex' decisions mainly based on different adaptation/waiver categories
- In-depth analysis necessary

5. General Concerns Identified



Special thanks to the colleagues from the BfR and the UBA
for their support.



Female adult of the water flea *Daphnia magna*.
Photo: Hajime Watanabe. <http://www.plosgenetics.org/article/browseIssue.action?issue=info%3Adoi%2F10.1371%2Fissue.pgen.v07.i03>

Thank you for your attention

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