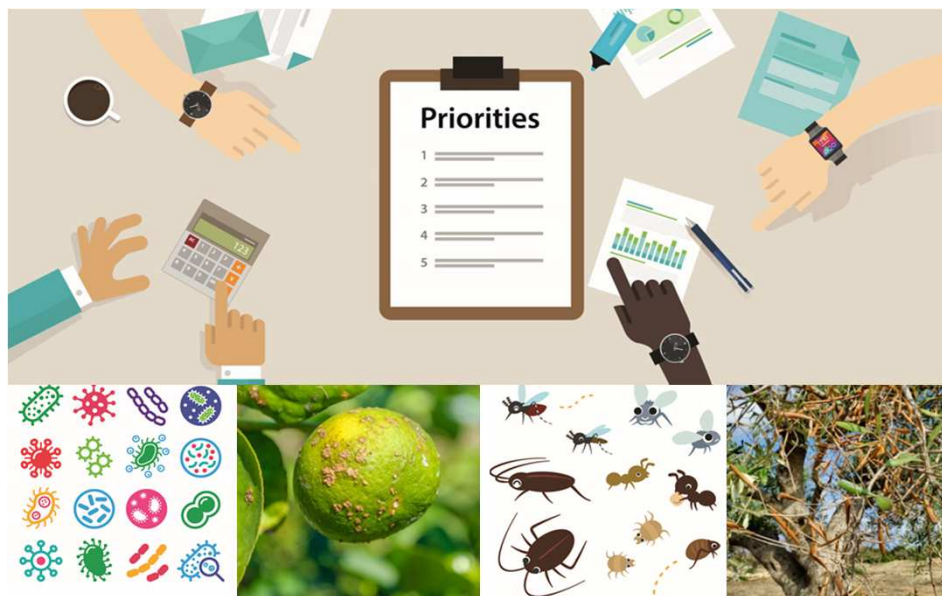


Agenda item #2: Responses to MS comments to proposed methodology and final fine-tuning.



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Expert Group Meeting on Plant Health Legislation – Brussels April 24th 2019



I2P2: JRC response to MS comments

Over-arching comments

Ranking of pests

Ranking differentiated for
pests affecting crops and
forestry

3 MS

JRC proposal:

Ranking for three categories of hosts: crops (22 pests) , forestry (6 pests) and agroforestry (2 pests)

Table 1. Classification of pests by type of host for which EFSA has provided impact parameter data.

Pest	Type of host		
	Crops	Forestry	Agro-forestry
<i>Agilus anxius</i>		X	
<i>Agilus planipennis</i>		X	
<i>Anastrepha luden</i>	X		
<i>Anoplophora chinensis</i>			X
<i>Anoplophora glabripennis</i>		X	
<i>Anthonomus eugenii</i>	X		
<i>Aromia bungii</i>			X
<i>Bactericera cockerelli</i>	X		
<i>Bactrocera dorsalis</i> (including <i>B. invadens</i>)	X		
<i>Bactrocera zonata</i>	X		
<i>Bursaphelenchus xylophilus</i>		X	
<i>Candidatus Liberibacter spp.</i>	X		
<i>Ceratocystis fagacearum</i>		X	
<i>Clavibacter michiganensis</i> subsp. <i>sepedonicus</i>	X		
<i>Conotrachelus nenuphar</i>	X		
<i>Dendrolimus sibiricus</i>		X	
<i>Grapevine flavescence dorée</i>	X		
<i>Phyllosticta citricarpa</i>	X		
<i>Popillia japonica</i>	X		
<i>Ralstonia solanacearum</i>	X		
<i>Rhagoletis pomonella</i> (Tephritidae (non-European))	X		
<i>Spodoptera frugiperda</i>	X		
<i>Synchytrium endobioticum</i>	X		
<i>Thaumatococcus leucocretus</i>	X		
<i>Thrips palmi</i>	X		
<i>Tilletia indica</i>	X		
<i>Xanthomonas citri</i>	X		
<i>Xylella fastidiosa</i>	X		

Note: shaded rows represent pest for which the analysis has not yet been completed

Source: own elaboration based on EFSA input

Normalization

No transformation for
normalization

1 MS

Taking logarithms to avoid
impact of extreme values

1 MS

Normalization taking all
pests together

1 MS

JRC PROPOSAL

As ranking will be made by type of hosts normalization will be made by type
of host too

No transformation prior to the normalization

Weighting across domains

Equal weights across all domains, sub-domains and indicators

14 MS

Different weightings for crops affecting crops and forestry

2 MS

Reduce weight of social by 50% and allocate it to economic and environment

1 MS

Possibility to change weights also at sub-domain and indicator level

2 MS

JRC PROPOSAL

Initial ranking: *equal weights for all domains, sub-domains and indicators*

Sensitivity analysis: *(based on final construction of indicator)*

a) All: 40 – 20 – 40 / Crops: 50 – 25 – 25 / Forestry: 50 – 0 – 50

Identifying priority pests post-ranking

Select also pests ranked #1 for each of the sub-domains

2 MS

Prioritize pests not present in the EU

1 MS

Avoid long list of pests identified as priority

1 MS

JRC PROPOSAL

The I2P2 can be used for any identification criteria – decision up to legislator

I2P2: JRC response to MS comments *(selected)* Specific comments

Mistakes in calculation of individual indicators for pests

Solved in the current calculation of indicators used

I.19 – Presence of affected hosts on cultural heritage landmarks only for forestry hosts

Reference to this indicator is not only in Section 2 of Annex I, which refers specifically to tree species, but also in Section 1 which refers to all hosts.

JRC PROPOSAL: kept for all hosts

Use global minimum for normalization and not the minimum of the analysed pests

Impact on value of indicator but not on ranking

JRC PROPOSAL: use sample minimum for normalization (update when new pests are added to the exercise)

Transformation of wood growing stock into annual flows

There is no transformation (lack of information on annual extraction rates or growth cycle)

JRC PROPOSAL: different ranking and normalization for pests affecting crops, forestry and agroforestry

Food security indicators over-estimate impacts

JRC PROPOSAL: the indicator now includes the yield loss parameter to reflect the actual impact of pest outbreak on food availability

Introduction of uncertainty into the analysis

Calculations made using medians of EFSA provided parameters

JRC PROPOSAL: sensitivity analysis will be made with Q1 and Q3 values of the distributions provided by EFA (*PENDING WORK*)

I2P2

host base for indicator calculation

All potential hosts	EPPO Global Database CABI datasheets PRAs	I.24 Share of Natura 2000 area and sites
Main hosts	Recent / relevant risk assessments	MS consultation for the construction of: I.19 Presence of affected hosts on cultural heritage landmarks I.20 Use of hosts as street trees and in parks
List with relevant impacts	EFSA EKE process	Yield Loss / Quality Loss / TDE / SR / Additional treatments / distribution / quarantine countries All other indicators

I2P2

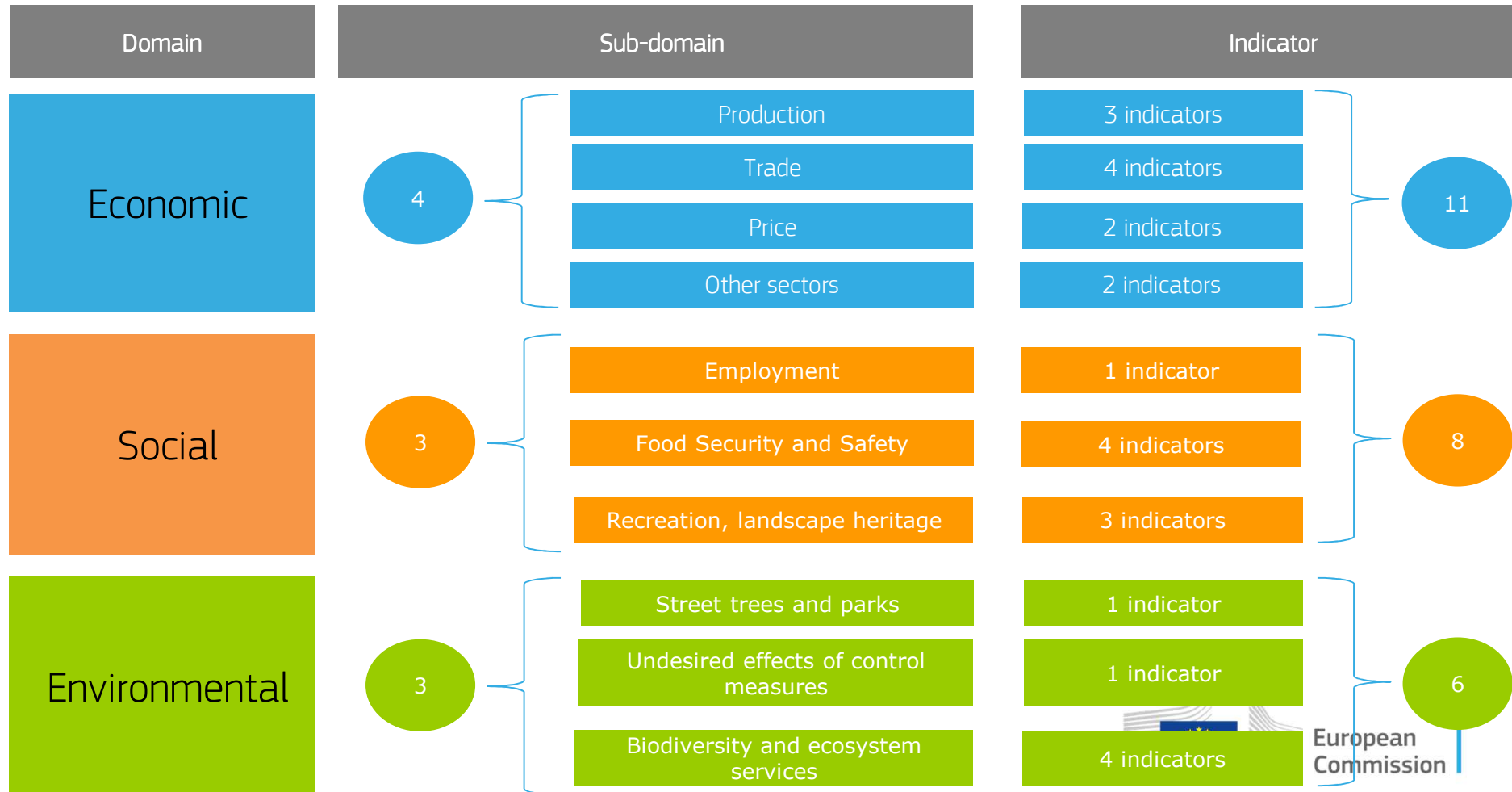
consistency and sensitivity analysis

CROPS

Data available for all indicators

Sufficient variability across pests to allow discrimination

I2P2 - CROPS



Indicator	Indicator Weight	Sub-domain weight	Domain weight
I.1 Maximum value of production losses	0.03	0.08	0.33
I.2 Share of EU production value affected	0.03		
I.3 Difficulty of eradication	0.03		
I.4 Number of importing expected to impose restrictions on trade	0.02	0.08	
I.5 Value of export losses	0.02		
I.6 Share of export losses over total production	0.02		
I.7 Trade dispersion	0.02		
I.8 Change in domestic price	0.04	0.08	
I.9 Change in domestic production over imports	0.04		
I.10 Upstream effects	0.04	0.08	
I.11 Downstream effects	0.04		
I.12 Job losses	0.11	0.11	0.33
I.13 Share of caloric supply	0.03	0.11	
I.14 Share of protein supply	0.03		
I.15 Share of fat supply	0.03		
I.16. Ability to produce fungal toxins	0.03	0.11	
I.17 Share of holdings with other gainful activities	0.04		
I.18 Products covered by EU quality labels	0.04		
I.19 Presence of affected hosts on cultural heritage landmarks	0.04	0.11	
I.20 Use of hosts as street trees and in parks	0.11		
I.21 Undesired effects of control measures	0.11		
I.22 Soil erosion	0.03	0.11	0.33
I.23 Number of protected species and habitats related to hosts	0.03		
I.24 Share of Natura 2000 area and sites affected	0.03		
I.25 Share under sustainable management practice	0.03		

Note – figures do not add up due to rounding.

CROPS

Data available for all indicators

Sufficient variability across pests to allow discrimination

FORESTRY

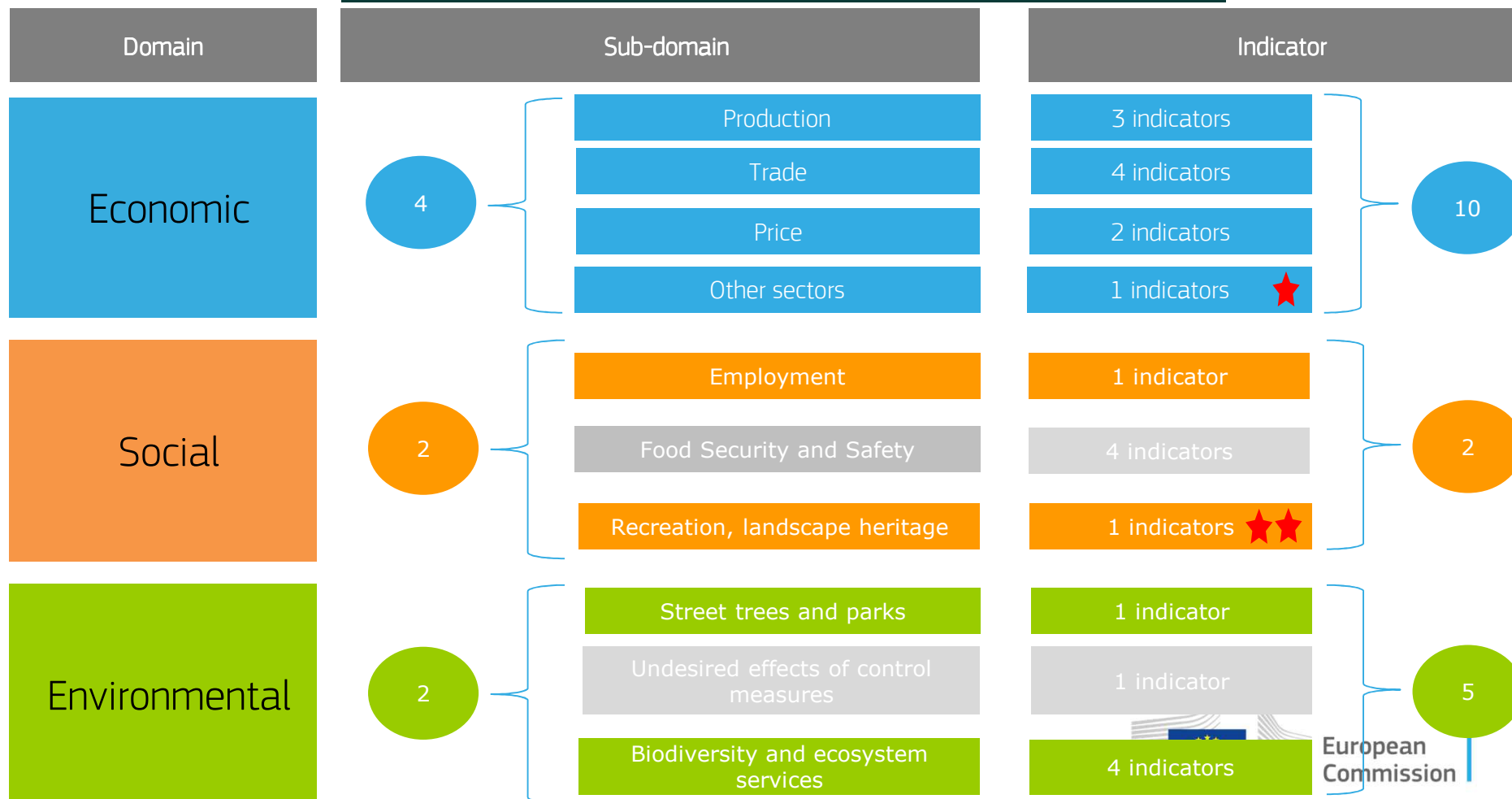
Food security indicators (I.13, I.14 & I.15) not applicable
EU quality labels indicator (I.18) not applicable

JRC PROPOSAL: discard these indicators and distribute weight among the remaining ones

No variability across assessed pests for indicators I.11, I.16, I.17 & I.21

JRC PROPOSAL: discard these indicators and distribute weight among the remaining ones

I2P2 - FORESTRY



Indicator	Indicator Weight	Sub-domain weight	Domain weight
I.1 Maximum value of production losses	0.03	0.08	0.33
I.2 Share of EU production value affected	0.03		
I.3 Difficulty of eradication	0.03		
I.4 Number of importing expected to impose restrictions on trade	0.02	0.08	
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I.15 Share of fat supply			
I.16. Ability to produce fungal toxins			
I.17 Share of holdings with other gainful activities			
I.18 Products covered by EU quality labels		0.17	
I.19 Presence of affected hosts on cultural heritage landmarks	0.17		0.33
I.20 Use of hosts as street trees and in parks	0.17	0.17	
I.21 Undesired effects of control measures			
I.22 Soil erosion	0.04	0.17	
I.23 Number of protected species and habitats related to hosts	0.04		
I.24 Share of Natura 2000 area and sites affected	0.04		
I.25 Share under sustainable management practice	0.04		

Note – figures do not add up due to rounding.

CROPS

Data available for all indicators

Sufficient variability across pests to allow discrimination

FORESTRY

No data for food security indicators (I.13, I.14 & I.15)
No data for EU quality labels (I.18)

JRC PROPOSAL: discard these indicators and distribute weight among the remaining ones

No variability for indicators I.16, I.16, I.17 & I.21

JRC PROPOSAL: discard these indicators and distribute weight among the remaining ones

AGROFORESTRY

Data available for all indicators for the only assessed pest

Discrimination capacity to be assessed when the remaining 2 pests are finalized

Correlation analysis

Across indicators (example for economic indicators for crops)

	I.01	I.02	I.03	I.04	I.05	I.06	I.07	I.08	I.09	I.10	I.11
I.01	1.00										
I.02	0.77	1.00									
I.03	-0.00	-0.12	1.00								
I.04	0.26	-0.06	0.28	1.00							
I.05	-0.08	-0.22	0.03	-0.10	1.00						
I.06	0.01	-0.12	0.39	-0.33	0.22	1.00					
I.07	0.12	-0.23	0.36	0.18	0.13	0.14	1.00				
I.08	0.53	0.77	-0.11	-0.06	0.29	-0.18	-0.19	1.00			
I.09	0.07	0.44	-0.17	0.03	-0.27	-0.19	-0.63	0.40	1.00		
I.10	0.90	0.77	0.05	0.37	-0.06	-0.08	0.05	0.57	0.01	1.00	
I.11	0.57	0.17	-0.02	0.55	0.10	0.03	0.14	0.09	-0.18	0.57	1.00

Across sub- domains (example for forestry)

	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.1	3.2	3.3
1.1	1.00									
1.2	-0.79	1.00								
1.3	0.68	-0.79	1.00							
1.4	0.75	-0.84	0.42	1.00						
2.1	0.78	-0.85	0.41	0.99	1.00					
2.2										
2.3	-0.44	0.43	0.96	-0.19	-0.21		1.00			
3.1	-0.31	0.48	-0.39	-0.22	-0.23		0.96	1.00		
3.2										
3.3	-0.51	0.71	-0.69	-0.30	-0.34		0.81	0.83		1.00

Across domains (example for crops)

	Economic	Social	Environmental
Economic	1.00		
Social	0.84	1.00	
Environmental	0.68	0.83	1.00

Correlation analysis

Avoid highly correlated indicators (>0.92)

No case

Avoid negative correlations within sub-domains unless specific trade-offs need to be incorporated

9 cases for crops
6 cases for forestry

Theoretically consistent



Thanks for your attention

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