

Welcome
to the virtual meeting of the
Water Framework Directive CIS WG Chemicals
subgroup on Emissions to Water
22nd April 2020



Agenda

13.15 Start the GoToMeeting connection

13.20 Check in time

1st block: 13.30 - 14.30

13.30 Round the table (Bouke)

13.40 Introduction (Caroline)

13.45 Summary of survey responses (Joost)

13.55 Short presentations from MS/stakeholders

Break: 14.30 - 14.45

2nd block: 14.45 - 16.00

14.45 Remaining presentations from MS/stakeholders

15.30 Presentation of the paper (Joost)

15.45 Reaction on the proposed discussion points

15.55 Follow up until September meeting (Joost)

16.00 Closing of the meeting







Summary of survey responses

- Large response
 - 9 MS (BE, IE, FR, IT, SW, DK, AT, DE, PO)
 - Concawe (Oil refinery industry)
 - ECPA (European Crop Protection Association)

- Question: is it ok to share the results?



1. What information is reported for industrial point sources by your country?


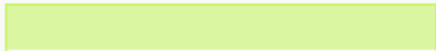

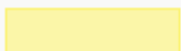

Choices	Percentage	Count
Industrial point sources as reported in E-PRTR	 54.55%	6
Industrial point sources as reported other than E-PRTR (more pollutants, more facilities)	 36.36%	4
Don't know	 27.27%	3
Not relevant	 18.18%	2
Total		11

Conclusions:

- E-PRTR is the basis for industrial point sources, but not always?
- More data can be reported



2. What information is reported for UWWTPs by your country?


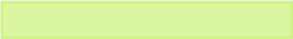





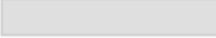
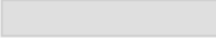
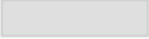
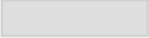
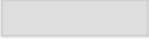
Choices	Percentage	Count
UWWTP as reported as reported in E-PRTR (>100 000 pe)	 45.45%	5
UWWTP as reported for the Urban wastewater treatment directive (UWWTD)	 45.45%	5
UWWTP other than E-PRTR or UWWTD (more pollutants, also < 100 000 pe)	 36.36%	4
Don't know	 18.18%	2
Not relevant	 18.18%	2
Total		11

Conclusions:

- E-PRTR is the basis for UWWTP point sources, but not always?
- More data can be reported



3. Does your country report diffuse emissions? If so, which ones?




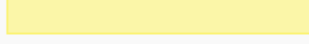
Choices	Percentage	Count
P1: Atmospheric deposition	 40.00%	4
P3: Surface runoff from unsealed areas	 40.00%	4
P7: Storm Water Outlets and Combined Sewer overflows + unconnected sewers	 40.00%	4
Don't know	 40.00%	4
P2: Erosion	 30.00%	3
P4: Interflow, Tile Drainage and Groundwater	 30.00%	3
P6: Surface Runoff from sealed Areas	 30.00%	3
P8: Individual - treated and untreated- household discharges	 30.00%	3
P12: Direct Discharges from Navigation	 30.00%	3
P5: Direct discharges and drifting	 20.00%	2
P11: Direct Discharges from Mining	 20.00%	2
Not relevant	 20.00%	2
Total		10
<i>Unanswered</i>		<i>1</i>

Conclusions:

- All pathways are reported by one or more countries
- Data and methods must be available



4. Does your country use models to calculate diffuse sources?

Choices	Percentage	Count
No	 36.36%	4
Don't know	 0.00%	0
Not relevant	 27.27%	3
We use the following model(s): · view	 36.36%	4
Total		11

Models used:

- MoRe
- MONERIS, MoRe
- Pegase
- WEISS

Conclusions:

- Several models available
- Models are fed with input (data, emission factors) that might be shared



5. Remarks

Industrial point sources

- Concawe publishes water emissions data from the EU refinery sector

UWWTPs

- Available information for UWWTPs: mean concentrations and emission factors

Diffuse sources

- Some MS use Riverine load approach instead of diffuse sources
- One MS uses the results reported by 6 different water agencies. At least one of the agencies has reported diffuse emissions
- Diffuse sources for heavy metals and PAH

Overall

- I'm new to this work area
- I'm not an expert at reporting



Proposal for a simplified method for the quantification of emissions to water

- Draft version 5th March 2020 + Annex table with:
 - Emission Factors per pathway and per pollutant
 - Definition of Activity Rates
 - Literature references
- Available information, data and methods used for emission inventories by some MS or stakeholders can be used by MS with limited data or limited capacity -> more efficient, more complete
- Supplementary to the Guidance Document -> not an obligation, but an opportunity
- Final goal to have a better EU-wide overview of sources -> more efficient mitigation measures for problem pollutants



Simplified method for the quantification of emissions to water

- Developed in International Commission for the Protection of the Rhine (*V. Mohaupt, U. Sieber, J. van den Roovaart, C.G. Verstappen, F. Langenfeld and M. Braun, Diffuse sources of heavy metals in the Rhine basin, 2001, Water Science and Technology*)
- Shows a rather good match with monitored water quality
- Using a limited number of emission factors and statistical data:

$$E_{p,a} = AR_a \times EF_{p,a}$$

Where:

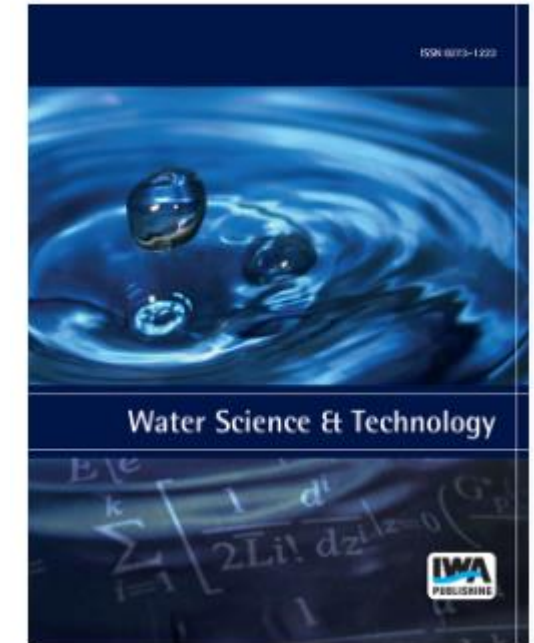
$E_{p,a}$ = Emission of a pollutant for an activity

AR_a = Activity Rate for an activity

$EF_{p,a}$ = Emission factor of a pollutant for an activity

Volume 44, Issue 7

1 October 2001



European Environment Agency
European Topic Centre on Inland,
Coastal and Marine Waters



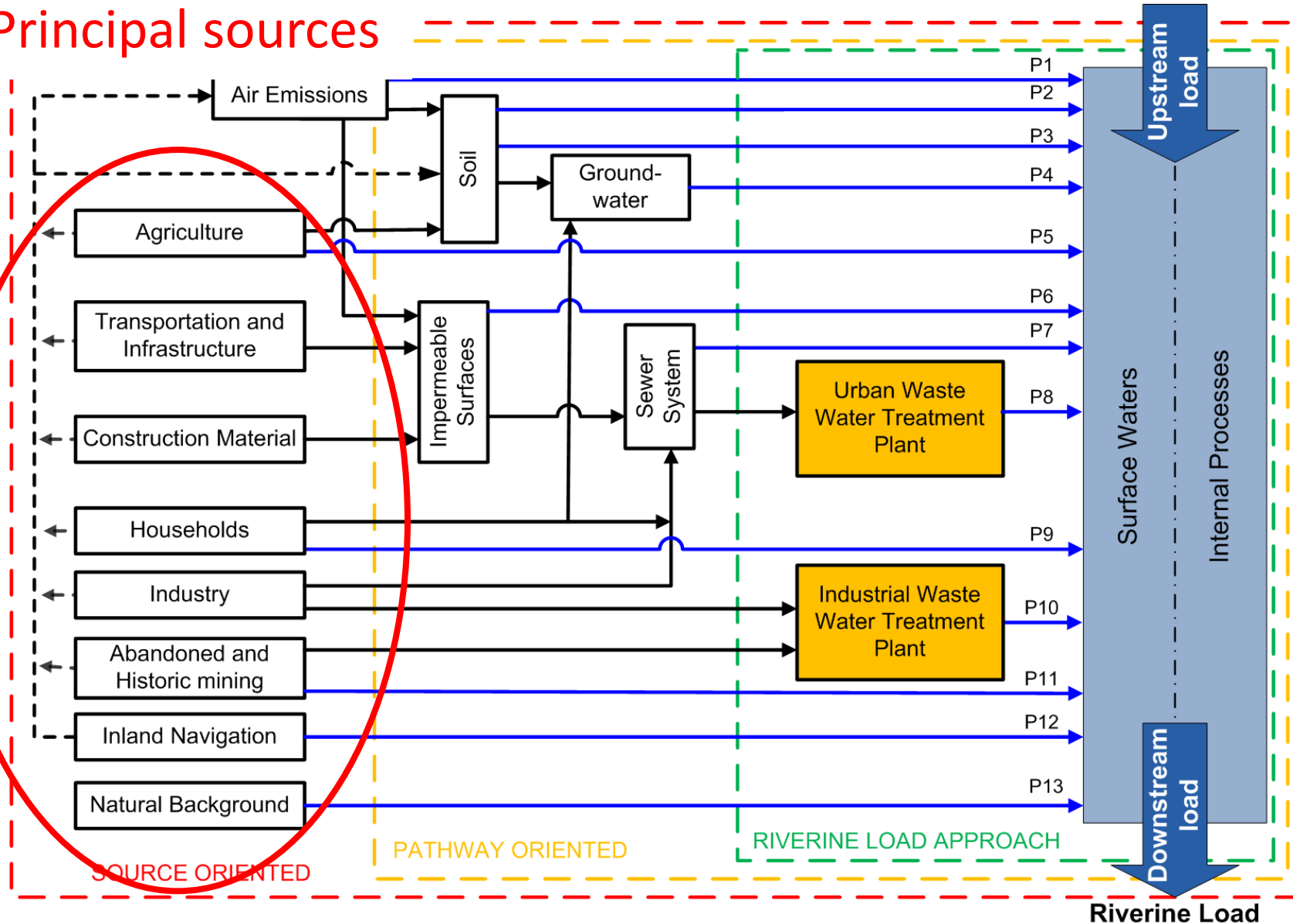
Proposal for a simplified method for the quantification of emissions to water

- Still a draft, work in progress, not sure how it will work out
- We received a lot of comments, suggestions and data references
- To be included in an update of the proposal
- Focus on discussion points (17) mentioned in the proposal, sometimes combining points



CIS WFD Guidance document No. 28 Preparation of Priority Substances Emission Inventory (2012): General scheme

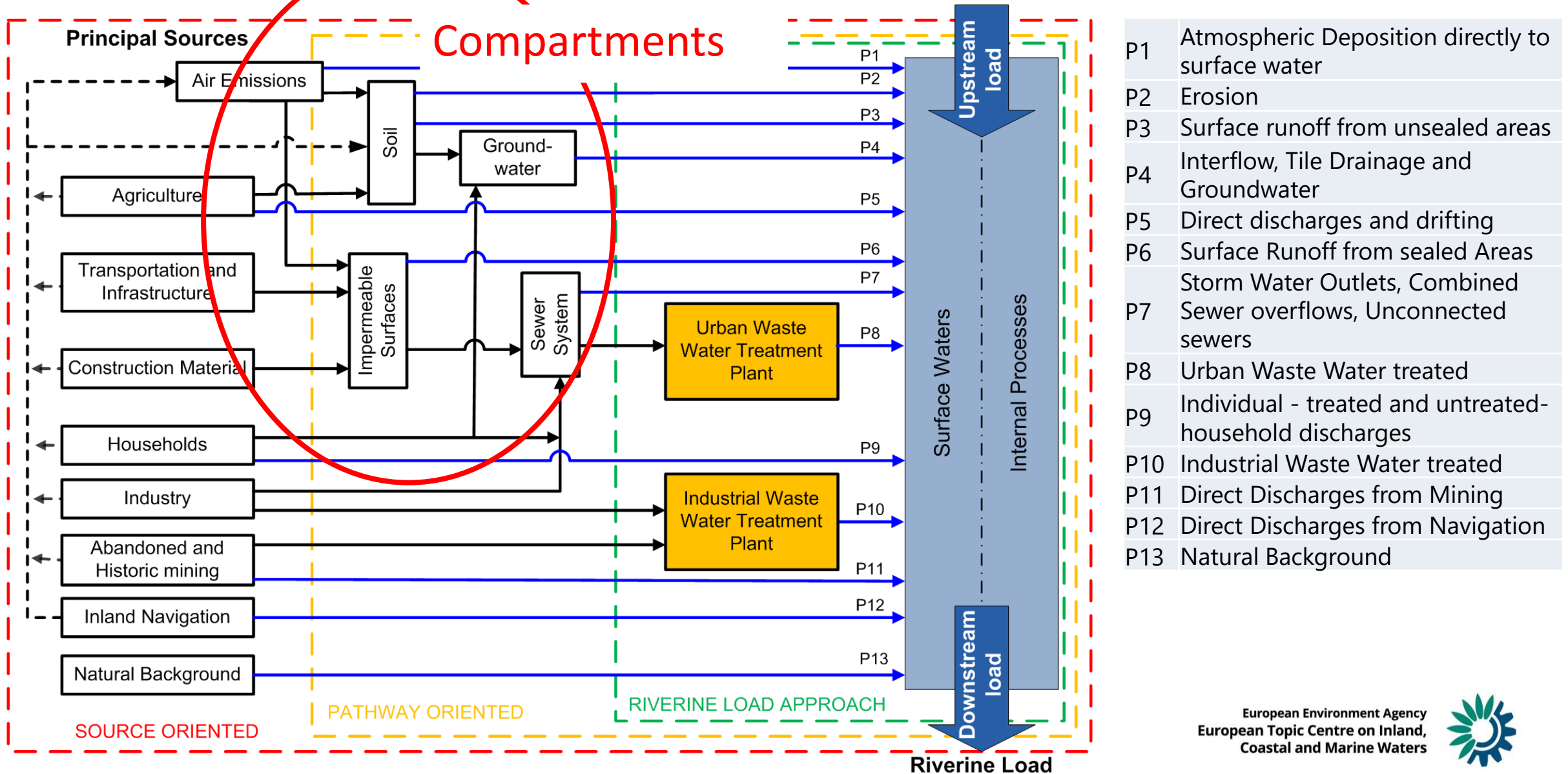
Principal sources



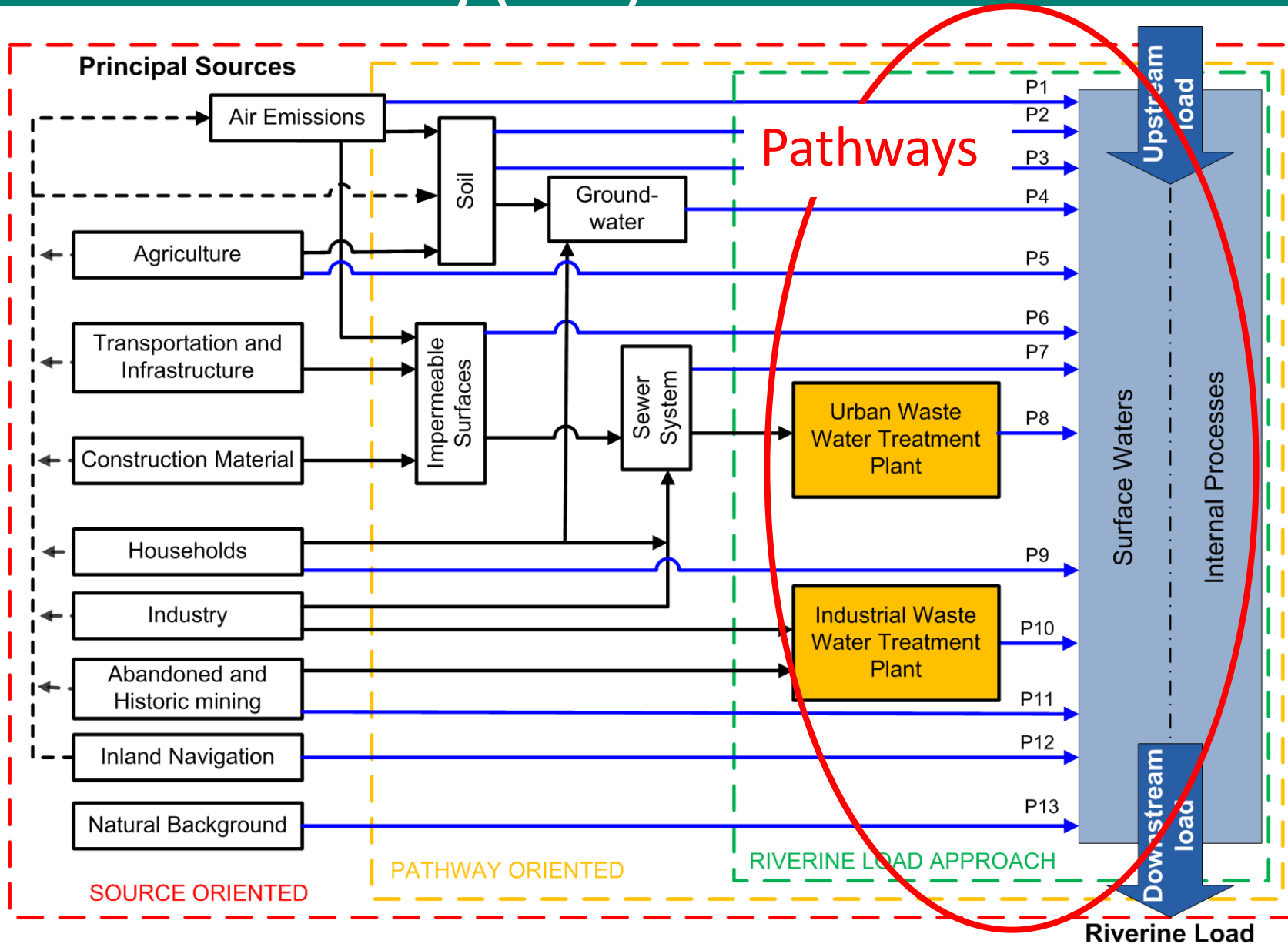
P1	Atmospheric Deposition directly to surface water
P2	Erosion
P3	Surface runoff from unsealed areas
P4	Interflow, Tile Drainage and Groundwater
P5	Direct discharges and drifting
P6	Surface Runoff from sealed Areas
P7	Storm Water Outlets, Combined Sewer overflows, Unconnected sewers
P8	Urban Waste Water treated
P9	Individual - treated and untreated-household discharges
P10	Industrial Waste Water treated
P11	Direct Discharges from Mining
P12	Direct Discharges from Navigation
P13	Natural Background



CIS WFD Guidance document No. 28 Preparation of Priority Substances Emission Inventory (2012)



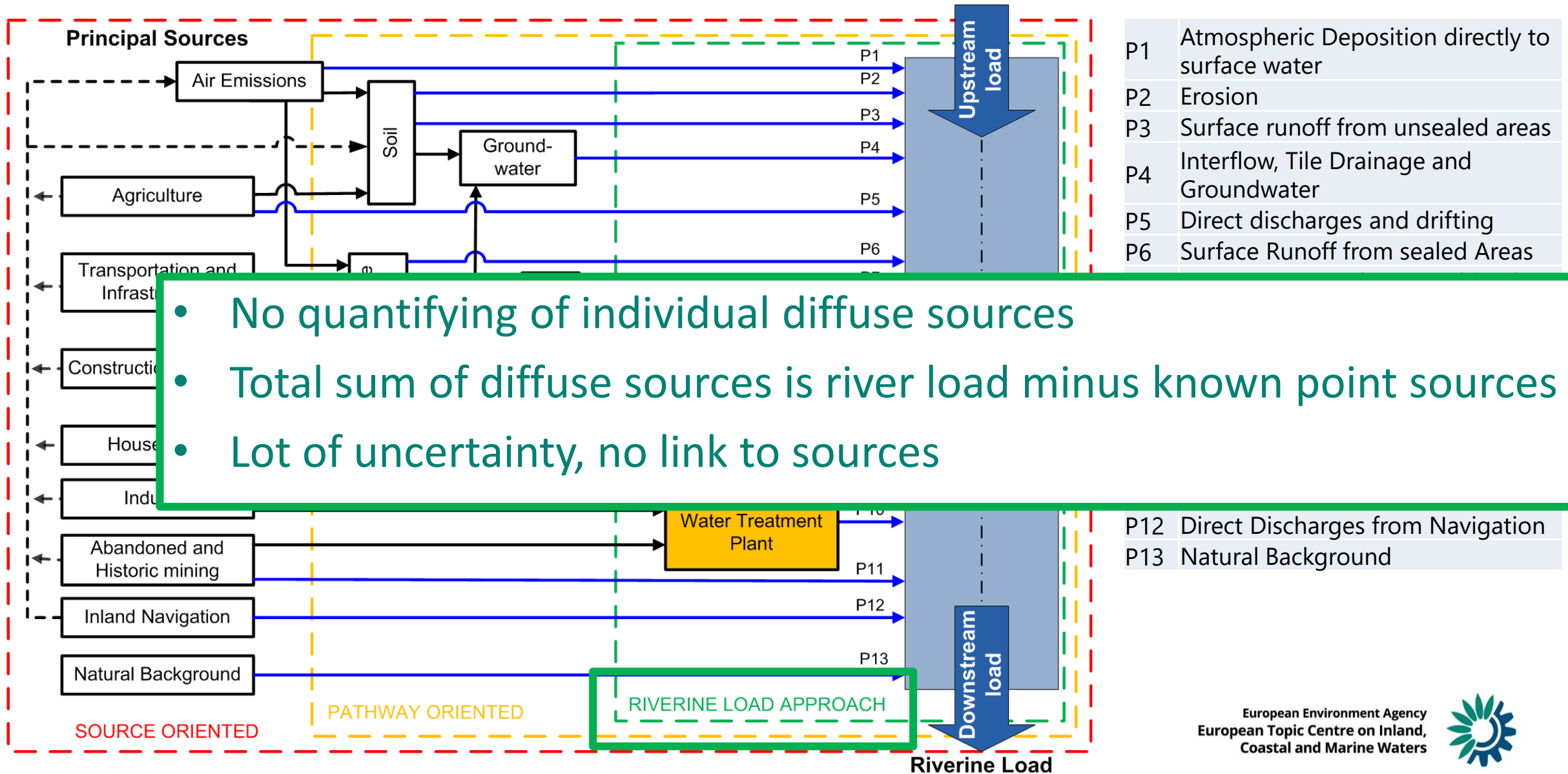
CIS WFD Guidance document No. 28 Preparation of Priority Substances Emission Inventory (2012)



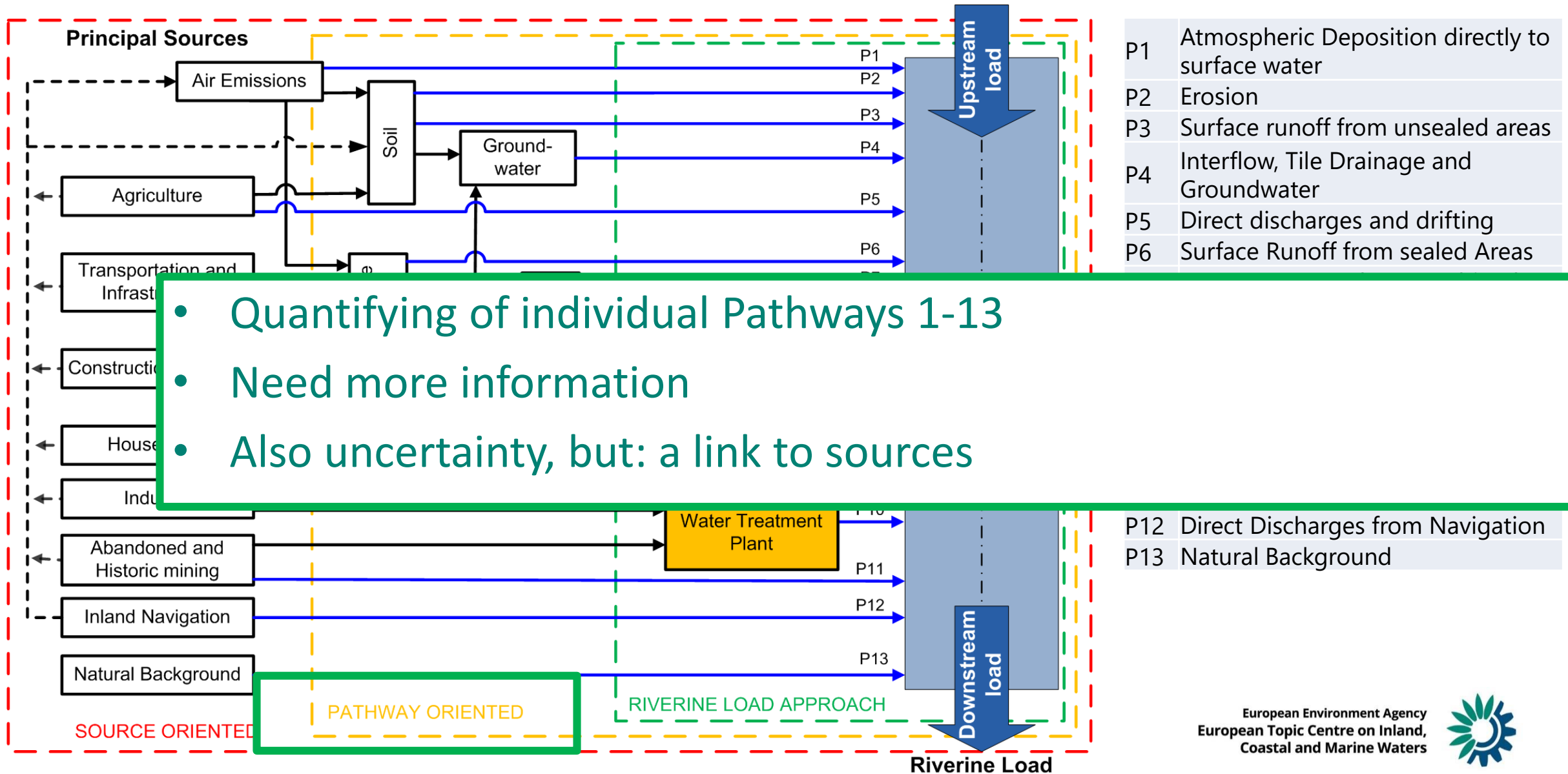
P1	Atmospheric Deposition directly to surface water
P2	Erosion
P3	Surface runoff from unsealed areas
P4	Interflow, Tile Drainage and Groundwater
P5	Direct discharges and drifting
P6	Surface Runoff from sealed Areas
P7	Storm Water Outlets, Combined Sewer overflows, Unconnected sewers
P8	Urban Waste Water treated
P9	Individual - treated and untreated-household discharges
P10	Industrial Waste Water treated
P11	Direct Discharges from Mining
P12	Direct Discharges from Navigation
P13	Natural Background



CIS WFD Guidance document No. 28 Preparation of Priority Substances Emission Inventory (2012)

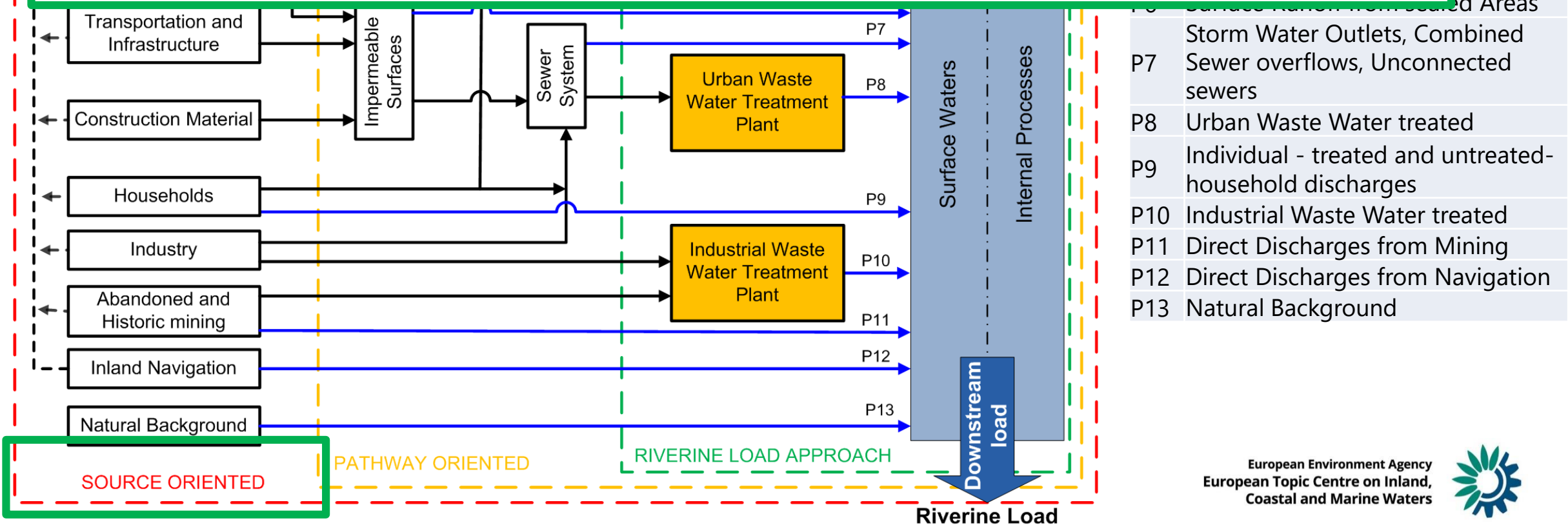


CIS WFD Guidance document No. 28 Preparation of Priority Substances Emission Inventory (2012)



CIS WFD Guidance document No. 28 Preparation of Priority Substances Emission Inventory (2012)

- Quantifying of principal sources and input sewer system + UWWTP
- Need still more information
- Also uncertainty, but: a link to principal sources



Discussion point 1 & 2 : propose to use the pathway approach

- Some MS still use the riverine approach
- But pathway approach is possible, shown by other MS
- Maybe we can “upgrade” to pathway approach



Discussion point 3: focus the emission quantification on the country level

- Some support from MS this would simplify the work for the inventory
- Some MS: work done on RBD level



Discussion point 4: use a preliminary list of 11 pollutants

- Suggestions to add (some) pesticides and pharmaceuticals
- Suggestion to add nonylphenol (instead of one of the PAHs)

Pollutant
total - Nitrogen
total - Phosphorus
Cadmium
Lead
Mercury
Nickel
Anthracene
Benzo(a)pyrene
Benzo(g,h,i)perylene
Fluoranthene
DEHP



Discussion point 5: helpful to add a clear definition of the pathways in this proposal?

- Yes, that would enhance common understanding and harmonization
- Confusion between P6/P7



Discussion point 6: Do MS and stakeholders agree with the deselection of P5 (pesticides) and P12 (navigation)?

- A result of the selection of pollutants
- Including pesticides (P5) would be appreciated



Discussion point 7: Do MS have recent data on deposition monitoring that could be shared (P1)?

- According to the survey: yes
- Received recent data from DK
- Deposition factors for PAH and Ni from FR



Discussion point 8: Is more recent data available for the substance content of fine soil by the soil erosion and are there ideas about other quantification methods?

- According to the survey: yes, data is available
- We have to check the data
- Suggestion to use substance versus phosphorus ratios



Discussion point 9: Regarding surface runoff from unsealed areas (P3): are there more recent data for the metal content of fertilisers?

- Suggestion to apply same conditions for MS-zones as under Regulation for Plant Protection Products
- Input from FR



Discussion point 10: Has surface runoff from sealed areas (P6) a significant contribution to surface water? Do MS use this pathway in their models?

- According to the survey: yes
- Research from FR?
- Almost ready national report from DK



Discussion points 11 & 13: EEA is considering supporting the coming WFD reporting by providing E-PRTR data from UWWTPs (P8) and industry (P10) already reported by MS. Would that be helpful to the MS?

- A testfile is already shared by EEA in WG Chemicals (March 2020)
- Some positive responses so far



Discussion point 12: sharing emission factors for UWWTP effluents to quantify smaller UWWTPs (< 100,000 pe) and unconnected households

- Recent publication from UBA (DE)
- Working on including more data from NL, UK
- Will be shared in this group and asked for feed back and extra data
- Question to specify if emission factors are expected to be applicable for whole EU, differ between MS or within MS



Discussion point 14: Would it be useful to carry out an analysis, together with the sector on a selected number of industrial activities(P10) for which facilities and/or pollutants seem to be missing?

- Recent EEA publication on industrial waste water
- Received information of refineries from Concawe
- Information of energy sector from Eurelectric
- Offer from FR to help?



Discussion points 15, 16, 17: Do MS have recent data on mining (P11), navigation (P12) and natural background loads (P13)?

- Mining and navigation: specific for some MS
- Include PAH for inland navigation
- Background is complex: in fact included in more pathways
- For metals: a lot of data available from the metal sector (Eurometaux)
- Almost ready national report from DK on natural background concentrations



Follow up

- Circulate today meeting results, including presentations and survey, 15th May
 - Asking response on draft Paper, 15th June
- Draft document on UWWTP emission factors, 15th May
 - Asking response on document and data, 15th June
 - Volunteers to help with workshop planning? 31st May
 - MS willing to co-chair this working group? 31st May
- Updated Paper combined with UWWTP emission factors, 15th August
- Meeting on 9-10 September at Deltares, Delft, Netherlands

