Evaluation of Agri-Environment-climate measures as part of the Rural Development Policy for the region of Flanders in Belgium: Text mining results

The policy analysis performed under Task 4.5 focused on a selection of agri-environment-climate measures from pillar two of the Common Agricultural Policy (article 28 of Regulation (EU) No. 1305/2013), as implemented in Belgium in the region of Flanders (2014-2020).

The method followed in this analysis was outlined in a dedicated document.[1]

Sources

After following the online Semex training, the agri-environment Policy curated reading list (CRL) was created in the Semex Reading Lists.

The CRL contains 31 sources (from VITO's library of 276 sources on Semex) addressing the pilot's rural development programme, and more specifically the agri-environmental programme and challenges faced in rural Flanders.

A second curated reading list was made with 83 sources. This list included peer-reviewed publications on the topic of agri-environment-climate measures.

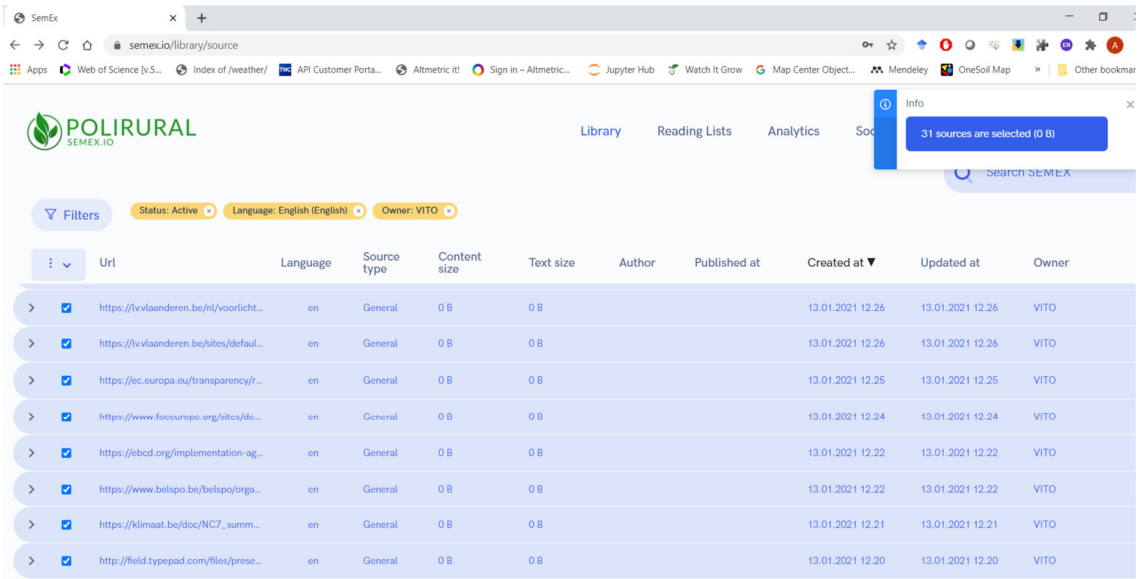

Figure 1. Creation of a curated reading list

Results

<u>Polarity scores: 31 sources</u>

With a polarity scope of topics and no other limits, the CRL (n=31) provided results on the number of topics related to agri-environment-climate measures (AECMs). The same graph is provided with the score interval set at 0.5 and thereafter at 0.1.

[1] https://docs.google.com/forms/d/e/1FAIpQLSebCVkC93WLu98GWAuauiR2rKvj6hr-mWWXNh2QrNwKvwCv6g/formResponse

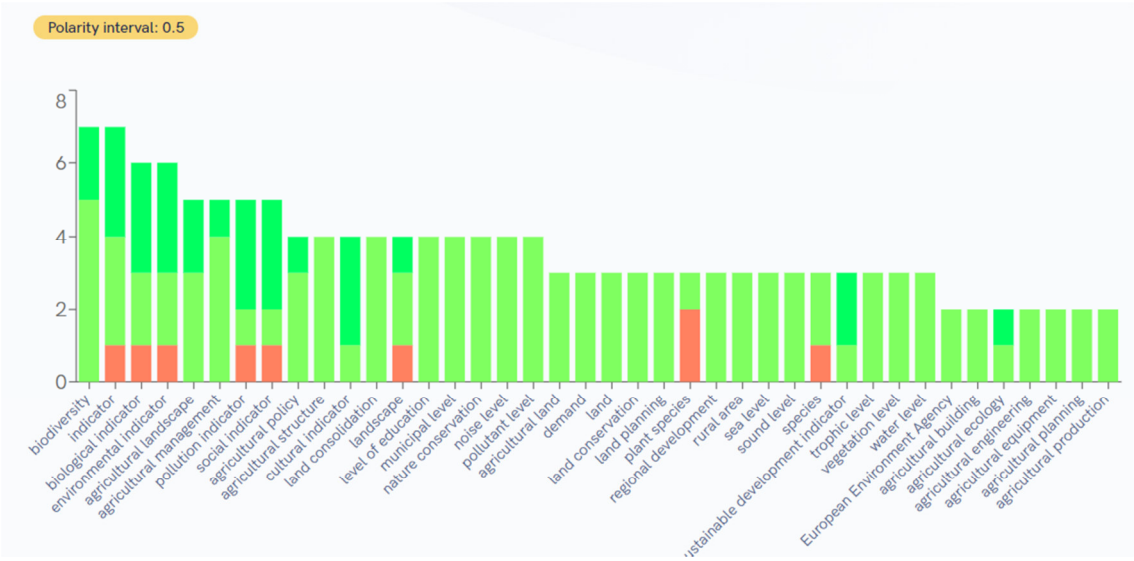

Figure 2. Polarity scores for the topics of the curated reading list (n=31) with polarity intervals of 0.5

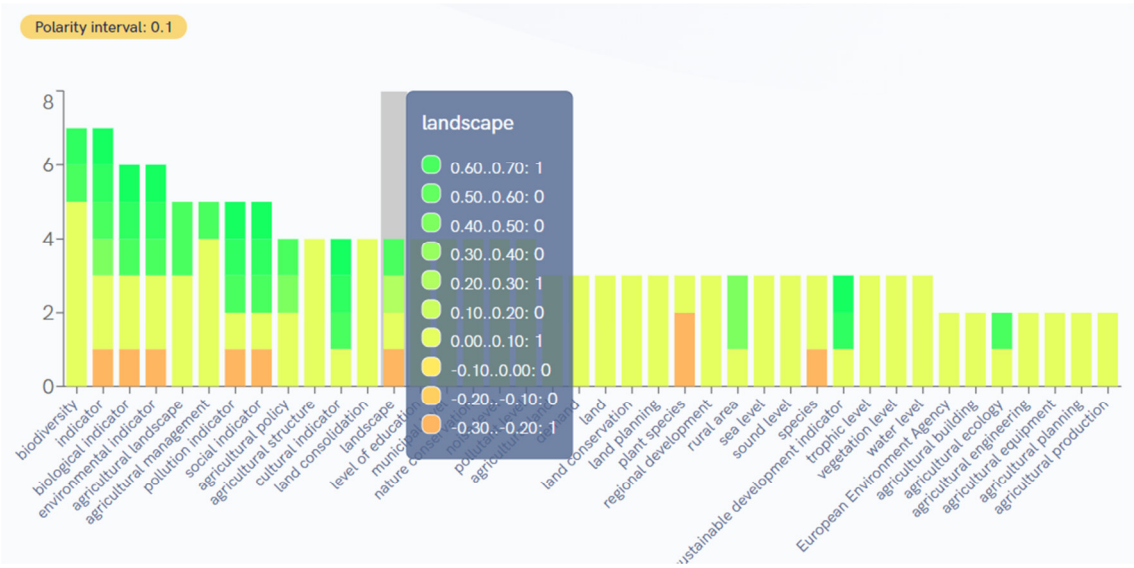

Figure 3. Polarity scores for the topics of the curated reading list (n=31) with polarity intervals of 0.1

For the majority of topics the sentiment is positive, but only just positive, as these are in the neutral category. From the top topics there is a strong emphasis on biodiversity, environment, agriculture and landscape. Environment, pollution, landscape and plant species have the highest proportion of negative sentiments.

The same analysis, but for the polarity scope “keywords” had indicators and biodiversity as top listed keywords. Overall the sentiment was neutral to slightly positive. For the keywords “indicators, area and landscape” negative sentiments were formulated.

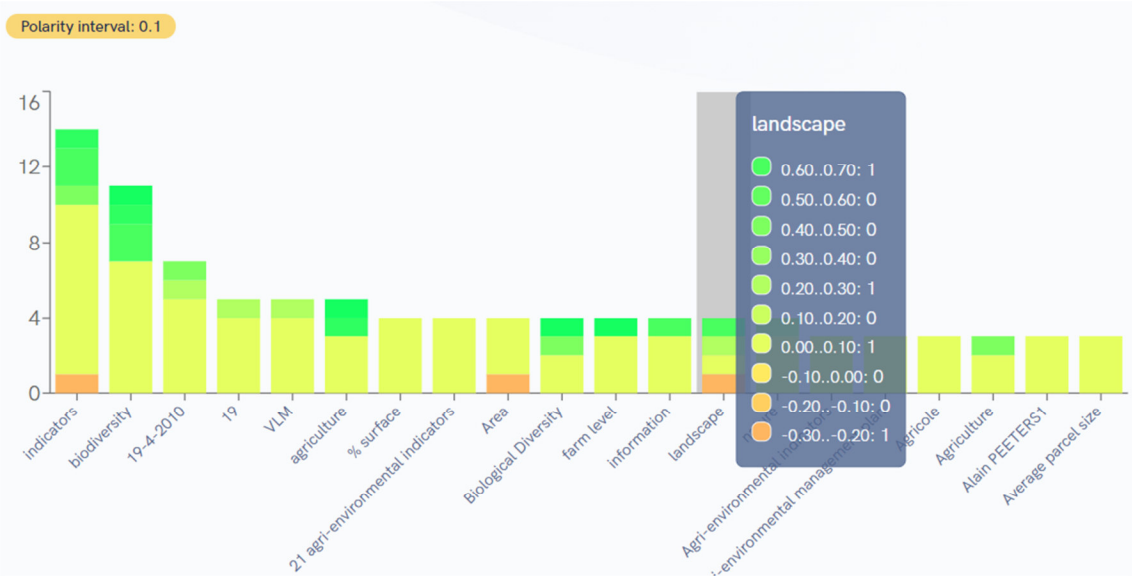

Figure 4. Polarity scores for keywords of the curated reading list (n=31) with polarity intervals of 0.1

<u>Polarity scores: 83 sources</u>

With a polarity scope of topics and no other limits, the CRL (n=83) provided results on the number of topics related to AECMs. The same graph is provided with the score interval set at 0.5 and thereafter at 0.1.

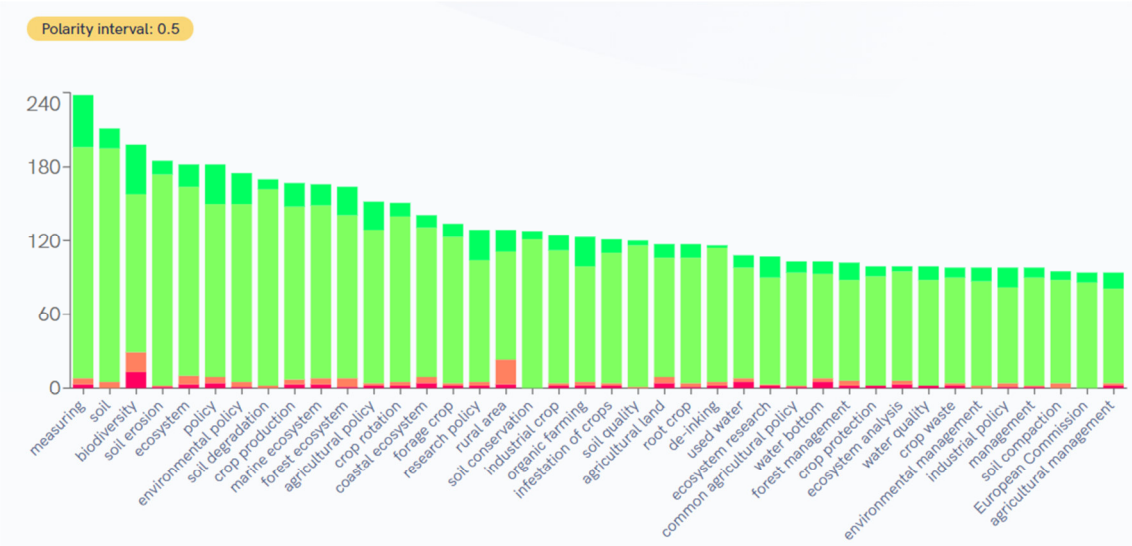

Figure 5. Polarity scores for the topics of the curated reading list (n=83) with polarity intervals of 0.5

For the majority of topics, the overall sentiment ranges from neutral to slightly positive, with a negative sentiment present for almost every topic. From the top topics there is a strong emphasis on measuring, soil, biodiversity, soil erosion and ecosystem. Biodiversity and rural area have the highest proportion of negative sentiments, with the scale made explicitly visible on the graph below.

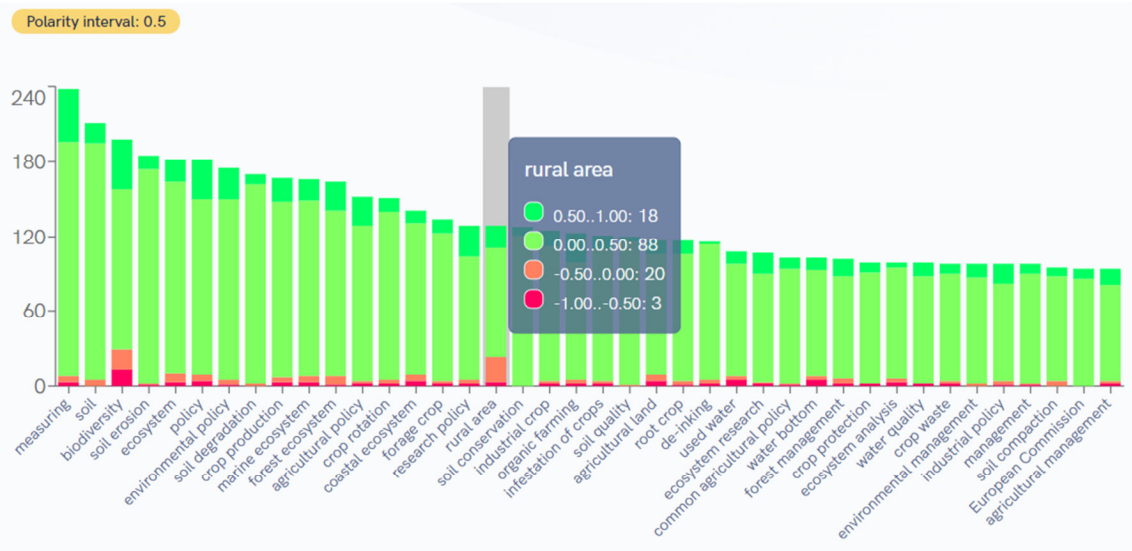

Figure 6. Polarity scores for the topics of the curated reading list (n=83) with polarity intervals of 0.5, visualising the scale for the topic rural area

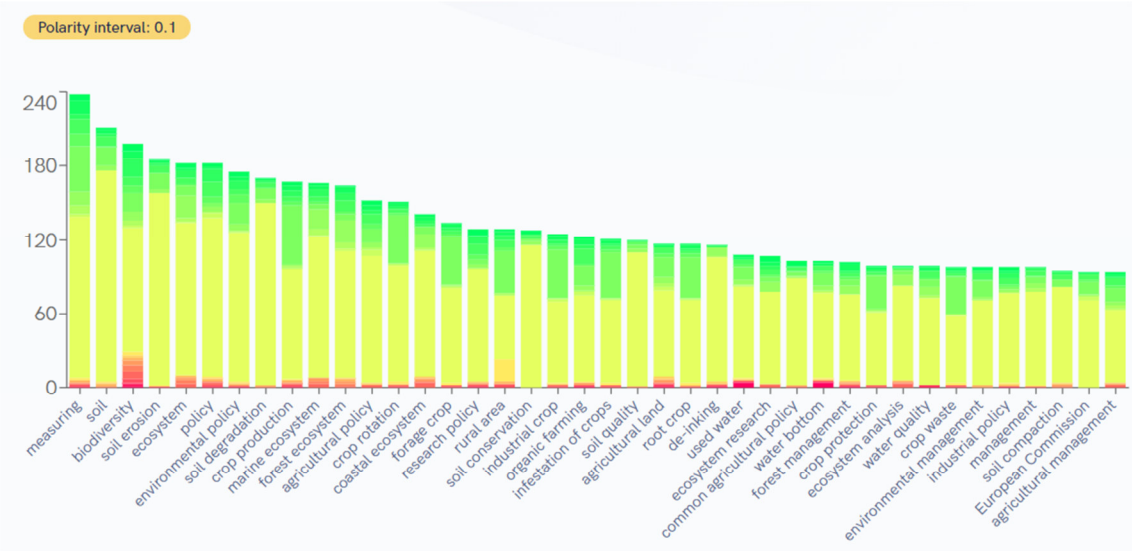

Figure 6. Polarity scores for the topics of the curated reading list (n=83) with polarity intervals of 0.1

The same analysis, but for the polarity scope “keywords” had farmers and biodiversity as top listed keywords. Overall the sentiment was neutral to slightly positive. For the top keywords “farmers, biodiversity and Flanders” negative sentiments were formulated.

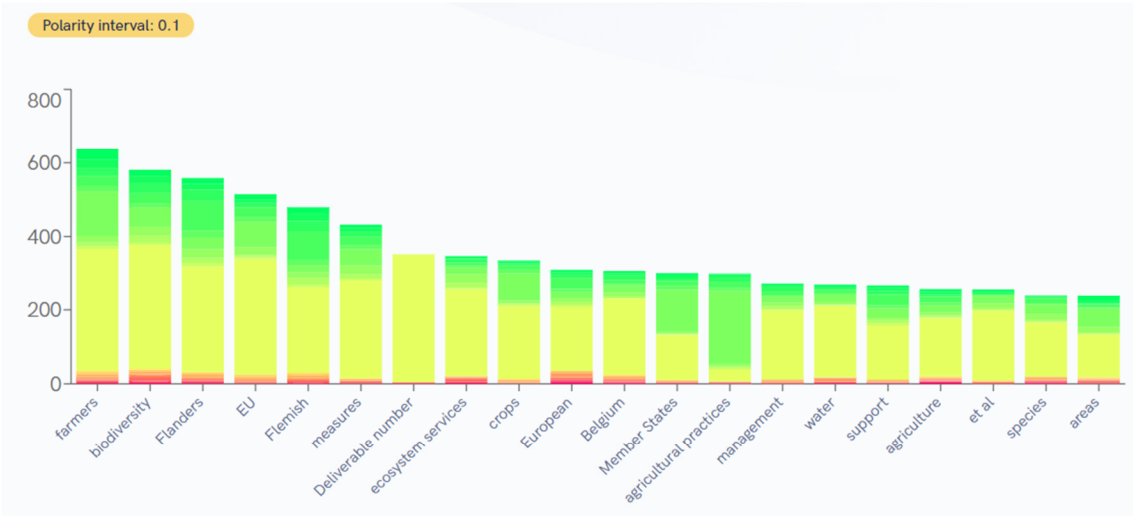

Figure 8. Polarity scores for keywords of the curated reading list (n=83) with polarity intervals of 0.1

Semantic Diagram

For the CRL (n=31) the team received a generic icon for the network analysis in Semex but no further analysis was possible for this particular CRL.

Conclusion

For the CRL (n=83) the team managed to generate the network analysis in Semex. The central topic is rural area, the definition of which is very central to the pilot region of Flanders in Belgium. The landscape is very fragmented and cut by ribbon development of housing. This fragmentation makes it difficult to attach a definition to what rural area means in a highly fragmented region.

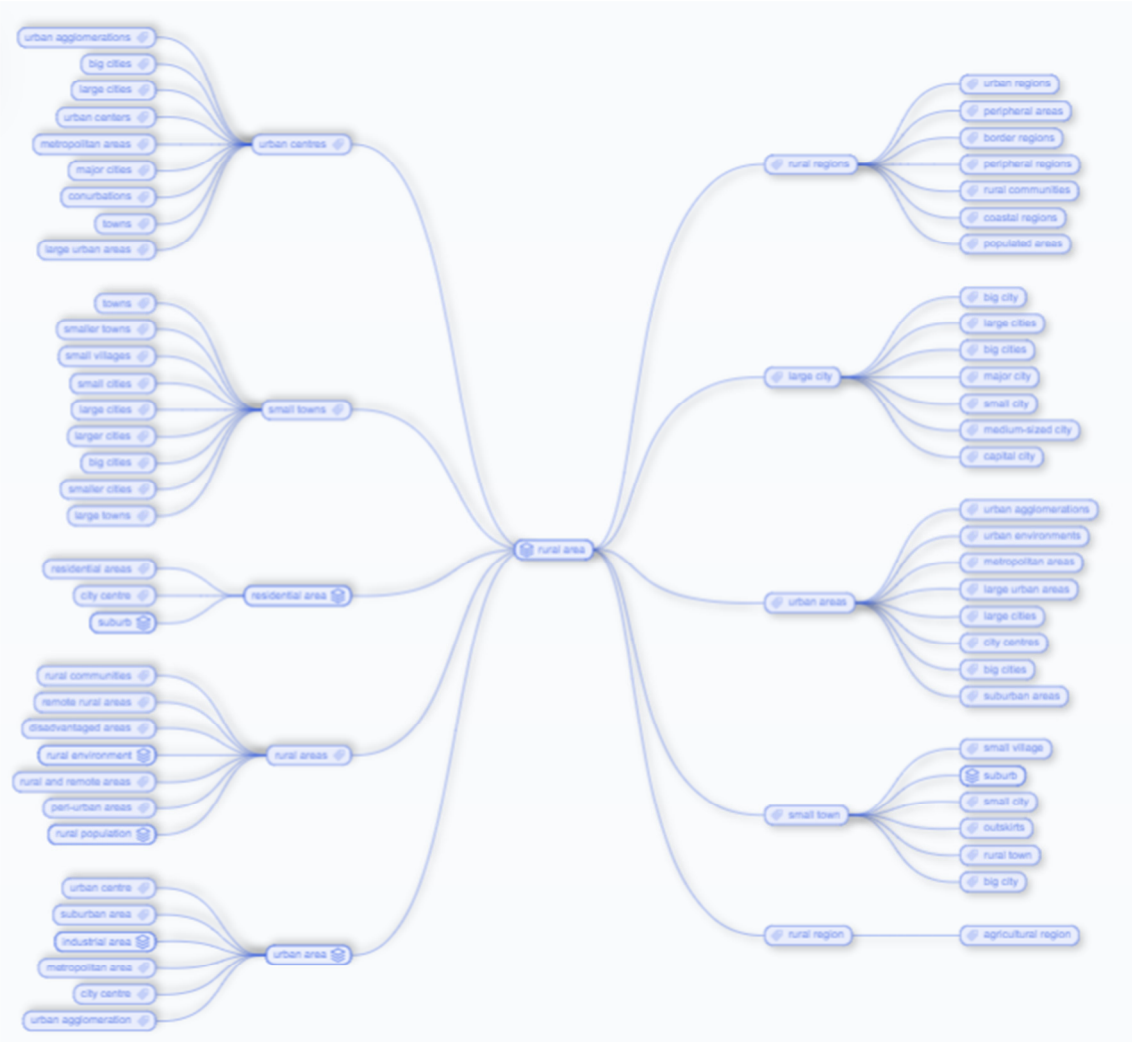

Figure 9. Network analysis in semex, with the central top rural area, for the CRL (n=83)