PERCEPTIONS OF BIOPLASTICS IN ONLINE COMMUNITIES: INSIGHTS FROM A SENTIMENT ANALYSIS ON REDDIT

Cruz, B.,[1] **Farias, A. R.,**[1] **Vaitsi, A.,**[1] **Domingos, S.,**[1] **Loureiro, A.,**[1] **Possidónio, C.,**[1] **Luís, S.,**[1] **& Portugal, E.**[1]

1 HEI-Lab: Digital Human-Environment Interaction Labs, School of Psychology and Life Sciences, Lusófona University (COFAC), Lisbon, Portugal.
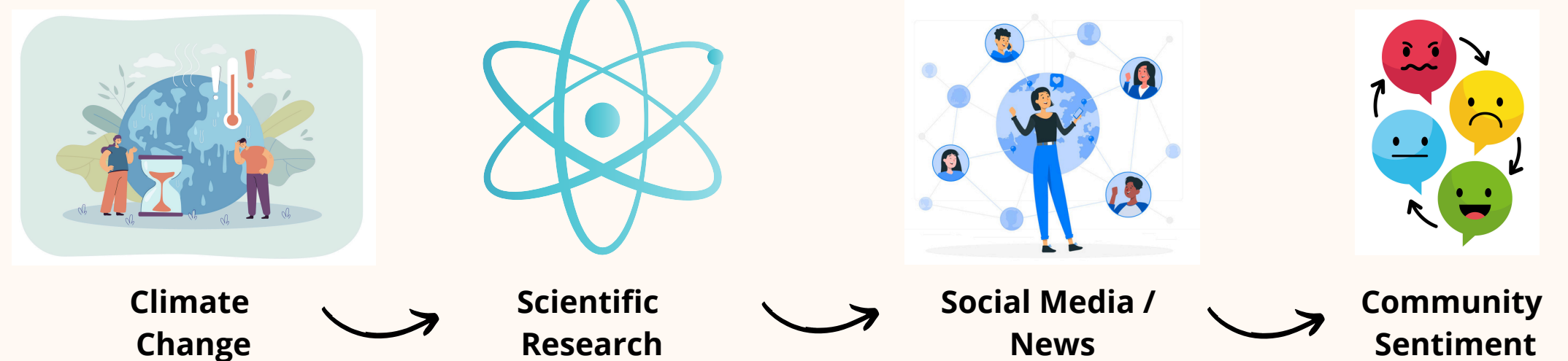
INTRODUCTION

The world is shiftting towards the adoption of sustainable practices.[1] Meanwhile, sustainable materials communication remains a challenge.[2] Some studies highlight the role of media and its influence on public perception, but litle emphasis has been placed on scientific articles in this sense.[3] The way articles are written, might simultaneously impact social media and public perception.[4]

EVENT COMMUNICATION

Climate Change → Scientific Research → Social Media / News → Community Sentiment

OBJECTIVES

Explore sentiment levels through **scientific articles** and **Reddit comments** related to **bioplastics.**

Understand if there is any related **pattern** between **articles** and **Reddit sentiment** over the **years.**

PRELIMINARY RESULTS

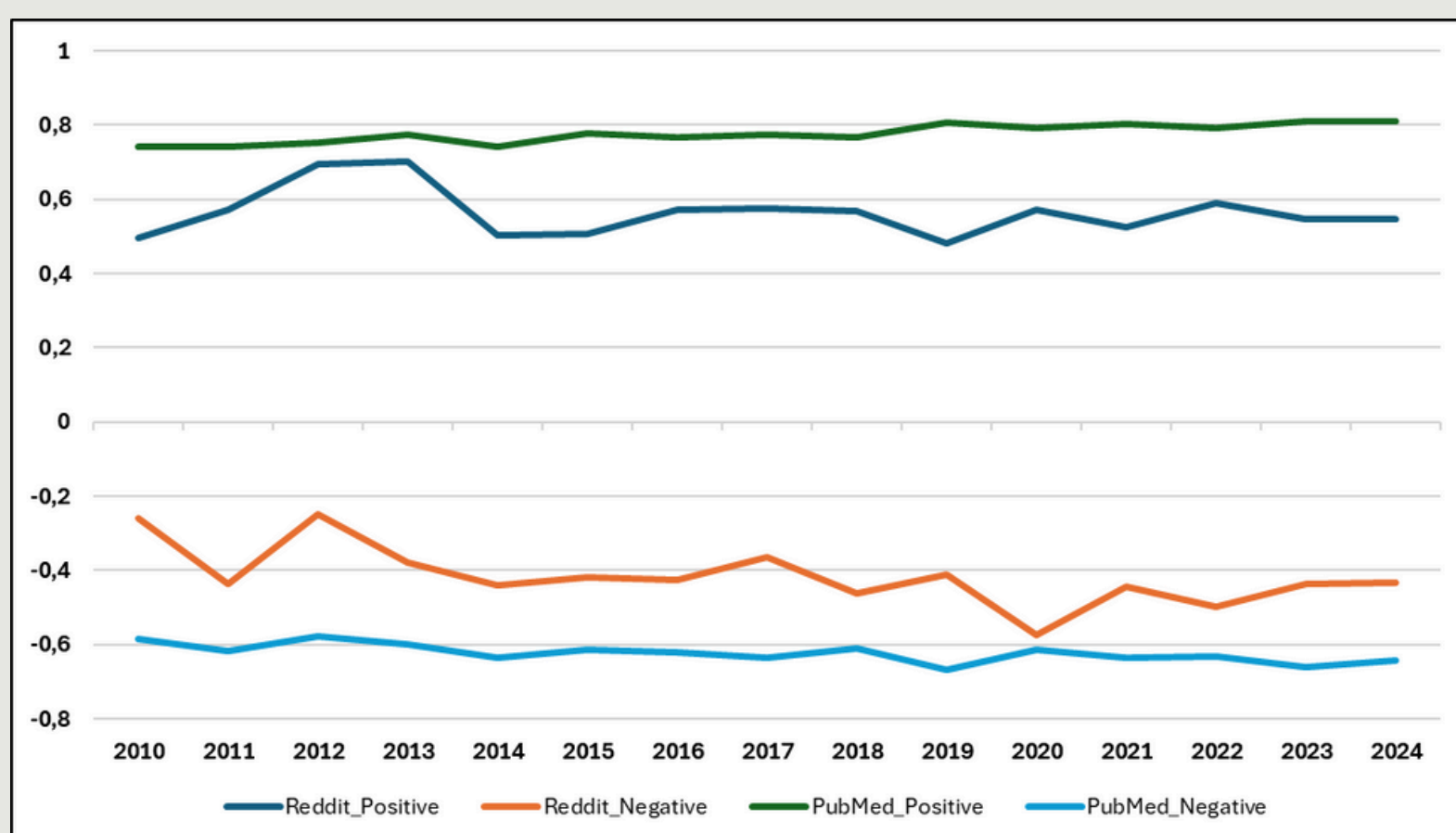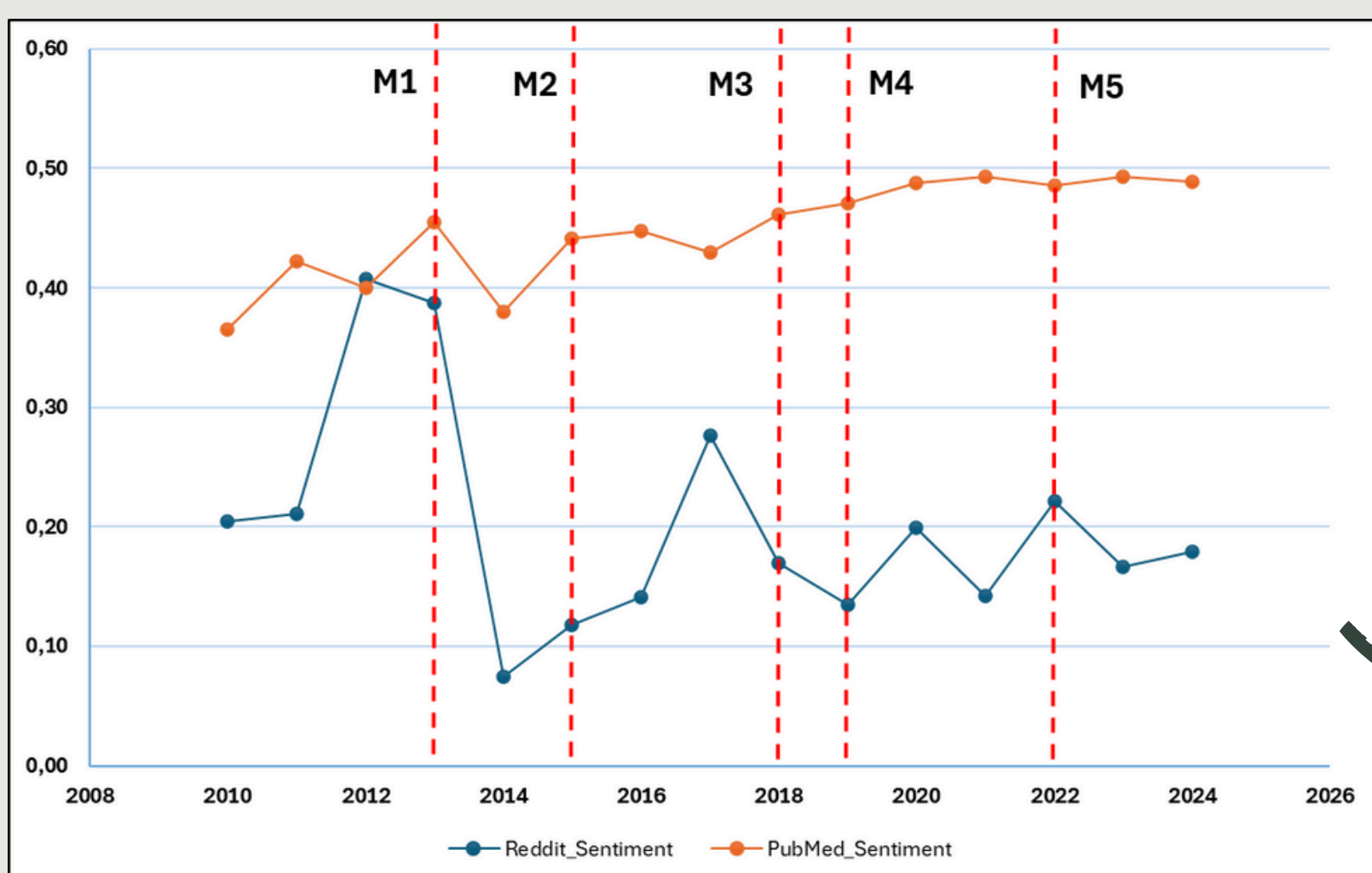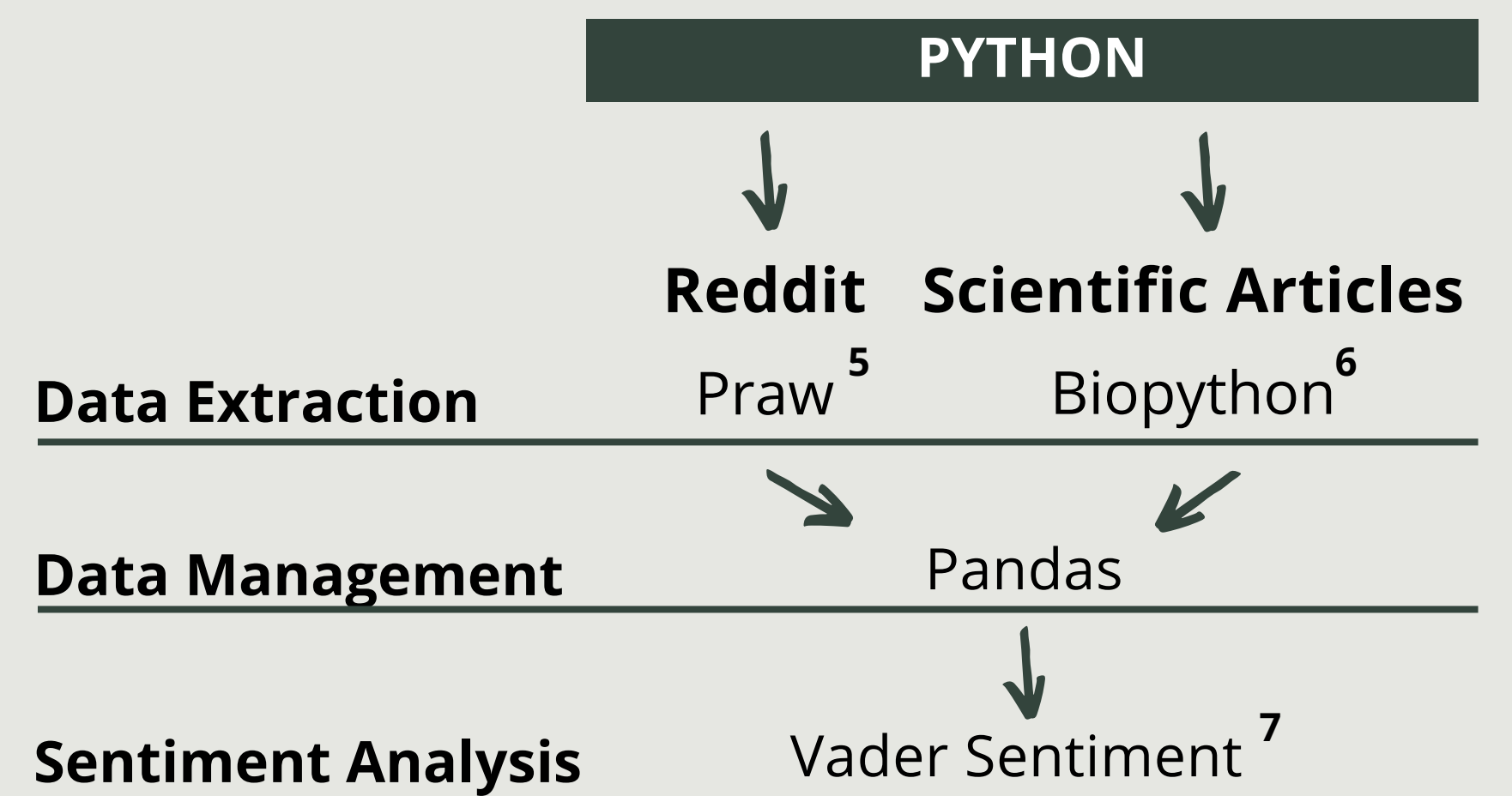**Fig. 1 - Average Sentiment Scores for Reddit and PubMed (Positive and Negative).**

Fig. 2 - Sentiment Comparison: Reddit *vs.* PubMed (2010-2024).

M1 - United Nations Conference on Sustainable Development (Rio+20).
M2 - Establishment of the Paris agreement, creation of the 2030 Sustainable Development Goals Agenda and adoption of circular economy action plan.
M3 - European Union plastics strategy.
M4 - Presentation of the European Green Deal.
M5 - Policy framework for biobased, biodegradable and compostable plastics.

METHODS

PYTHON

	Reddit	**Scientific Articles**
Data Extraction	Praw [5]	Biopython[6]
Data Management		Pandas
Sentiment Analysis		Vader Sentiment [7]

DISCUSSION

Overall results suggest that scientific articles might have an important contribute in explaining public perceptions variances.

FINDINGS

- Time-related bioplastics events can be related to fluctuations in articles and Reddit users sentiment.
- Overlap between articles sentiment and Reddit users sentiment over the years.
- Articles showed higher levels of sentiment (positive and negative) compared with Reddit users.
- Negative sentiment articles can predict variances in positive and overall sentiment among Reddit users.

FUTURE RESEARCH

Compare users sentiment in other social network platforms. ↔ Explore social media role together with articles in predicting public sentiment.

REFERENCES/OTHER INFORMATION