



USING TWITTER TO UNDERSTAND POST-2015 GLOBAL DEVELOPMENT PRIORITIES



PARTNER: UN MILLENNIUM CAMPAIGN, DATASIFT
PROGRAMME AREA: POST-2015

SUMMARY

Global Pulse and the UN Millennium Campaign developed a social media monitor of priority topics related to the Post-2015 development agenda. The monitor aims to provide real-time information on the development issues that most concern people around the world. By filtering Twitter every day for comments relevant to sixteen key development topics, the monitor shows which topics are most talked about in different countries over time. The monitor filters tweets using a taxonomy of approximately 25,000 words in English, French, Spanish and Portuguese, yielding around 10 million relevant new tweets each month. Global Pulse developed an interactive online dashboard that automatically updates monthly to visualize country-level topics of conversation. By 2015, the dashboard had been used by over 15,000 people, including support to several policy initiatives during the Post-2015 agenda setting process.

BACKGROUND

The UN Millennium Development Goals (MDGs) were established in 2000 to provide a blueprint to address global development challenges such as extreme poverty, education and health. The MDGs expire in 2015, and a new global development framework is being created for the next fifteen years.

In support of the Post-2015 process, the UN Millennium Campaign (UNMC) carried out the MY World survey of over 7 million individuals in 193 countries to understand global development priorities in communities around the world.¹ The survey is one of several opportunities for public voices to help inform the political process shaping the Post-2015 development framework.

Global Pulse worked with UNMC to explore ways to listen to and illustrate the opinions and concerns of people around the world using Twitter.

ANALYSING TWEETS TO MEASURE DEVELOPMENT PRIORITIES

Through a partnership with social data company DataSift, Global Pulse filtered billions of public tweets to extract tweets about the sixteen Post-2015 topics identified for the MY World survey.

In order to filter and categorise tweets about Post-2015 topics, a taxonomy of keywords related to each of the sixteen topics was developed by development experts together with UNMC and Global Pulse.² The taxonomy was comprehensive and global containing over 25,000 keywords, each translated into four languages - English, French, Spanish and Portuguese.

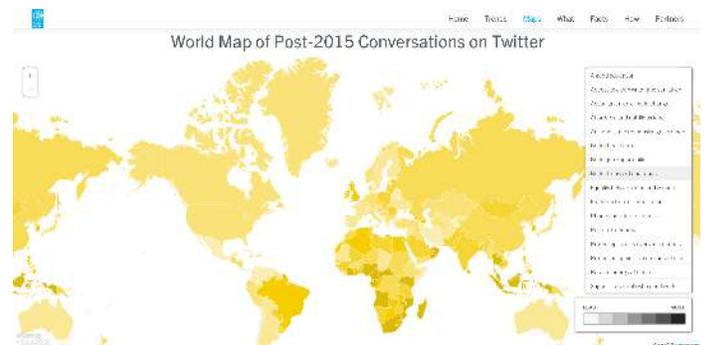
Location data was also collected from tweets. Because only 1-2% of tweets contain the user's precise geographic location, tweets were distributed by country using self-reported locations instead of metadata contained in the tweet, which allowed more than half of the tweets extracted to be used for country analysis.

PROJECT OUTCOMES

Using the keyword taxonomy, over 295 million tweets about the sixteen Post-2015 development topics were extracted from over 45 million individual Twitter accounts. Approximately 43% of tweets were from females' accounts, based on the 44% of analysed tweets where it was possible to determine the gender from the user's name. 60% of all extracted tweets were written in English and about 30% were in Spanish. Portuguese and French tweets made up 6% and 4%, respectively, of the total tweets filtered.

An interactive online dashboard was developed to continually filter and analyse public tweets relevant to the sixteen Post-2015 topics. The monitor displays several different visualisations that compare the volume of tweets about each topic over time and proportional differences in volume between countries. The dashboard can be viewed online at: <http://post2015.unglobalpulse.net/>

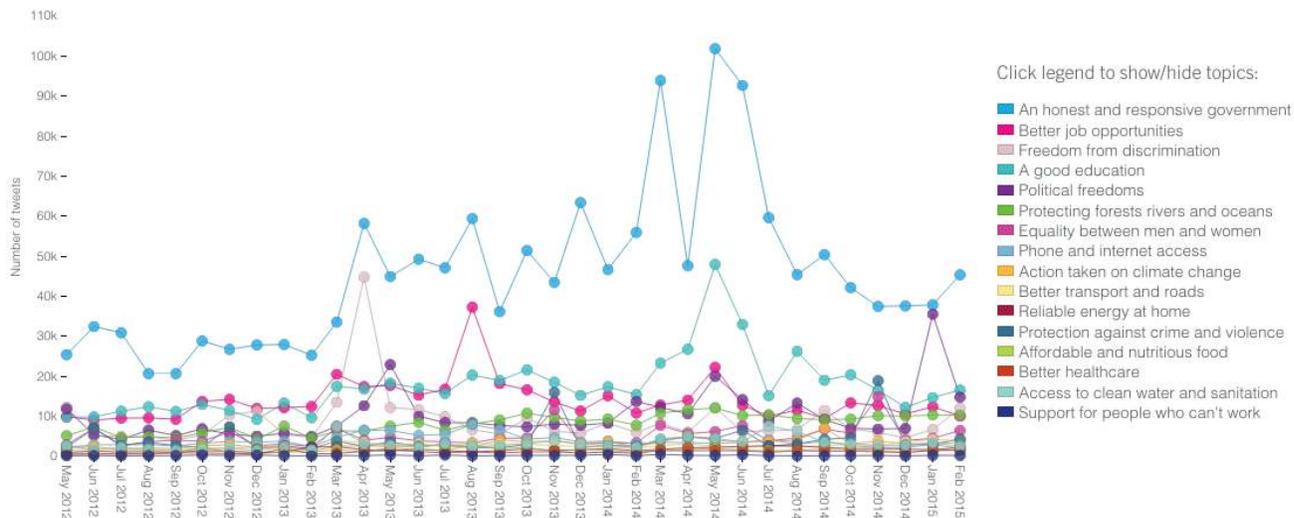
A world map visualization shows the twenty countries that have proportionately tweeted most about each of the sixteen Post-2015 topics. For example, Indonesia is one of the top countries that tweeted most about 'better transport and roads,' which may not come as a surprise because it is a populous country with a saturated transport infrastructure.



The map above highlights areas tweeting most frequently about 'better transport and roads'. The darker areas indicate where the topic is most discussed, for example, South Africa and Indonesia.

¹ The Post-2015 MY World survey can be found at <http://vote.myworld2015.org/>

² The keyword taxonomy can be accessed at: <http://app.datasift.com/essence/pysaqv>



The visualisation above shows tweets about Post-2015 topics from Colombia. The outlying line shows the high volume of tweets about 'an honest and responsive government,' indicating concerns with the widespread corruption in the country. There are visible spikes in volume of tweets about 'freedom from discrimination' in April 2013, when Colombia's Congress voted against a bill to legalise same-sex marriage; 'better job opportunities' in August 2013 during a nationwide strike against trade agreements and fuel prices; and education in May 2014 during a nationwide teachers strike affecting nearly 9 million students.

The line graph visualisation allows users to filter by country using a pull-down menu to see the volumes of tweets about each topic. Clicking on each topic or line allows the user to customize how many topics are visible, and clicking on each node displays monthly details. For example, clicking on the August 2013 node shows the exact number of tweets about 'better job opportunities,' as well as the top 24 words that appear in these tweets (including 'agrarian,' 'artists,' 'unemployment,' and 'ESMAD,' or riot police):

Topic: Better job opportunities
 Month: August 2013
 Number of tweets: 37,295

Top 24 words:

desempleo, colombia, campesinos, agrario, país, trabajo, están, entrar, nacional, está, también, juanmansantos, gobierno, colombianos, oportunidades, bavaria, santos, tirar, creativos, ocurra, desempleado, presidente, elespectador, esmad

The visualisations often correspond with political or development related events. When the Parliament of India passed the Food Security Act, also known as the Right to Food Act, in September 2013, discussion on Twitter increased by almost 300% in the month leading up to Parliament's decision. In Portugal, the outlying topic is jobs, as unemployment rose to a high of 15–17% from 2012–2014. In Spain, people tweeted most about government, with the volume of tweets doubling in November 2014 due to corruption scandals.

CONCLUSIONS

This project demonstrated how big data and visual analytics could help monitor public engagement on development issues. By monitoring Twitter in near real-time, it was possible to compare how people in different countries and regions prioritized Post-2015

issues, and how the focus changed over time.

The interactive Post-2015 dashboard has been accessed over 15,000 times in 164 countries from 2013 to 2015. Both this dashboard and Global Pulse's climate change dashboard, developed in 2014 to measure tweets about climate change, have been added to the World We Want 2015 website as a key tool for policymakers to monitor trends in public opinion during the Post-2015 process.³

This dashboard has helped policymakers understand the priorities of their constituencies as expressed on Twitter. The taxonomy was used in subsequent data analysis projects focused on public opinion around development issues, and could be translated to additional languages to analyse other social media data sources.

IMPLICATIONS & RECOMMENDATIONS

- This project showed how filtering tweets using a taxonomy of keywords can reveal which development issues were most discussed on Twitter in countries around the world.
- It is recommended to compare the Post-2015 priorities derived from this study with other surveys conducted around development issues, and also explore combining these data-driven insights for a more comprehensive understanding of public opinion.
- It is recommended to update the taxonomy to reflect the newly developed Sustainable Development Goals (SDGs) and include additional languages such as Russian, Chinese and Arabic for a more comprehensive understanding of development priorities.
- It is recommended to explore how near real-time social media data could support the monitoring and evaluation of the SDGs, which are being developed as part of the Post-2015 process.

HOW TO CITE THIS DOCUMENT

UN Global Pulse, 'Using Twitter to Understand Post-2015 Development Priorities', Global Pulse Project Series, no.6, 2014.

³ The World We Want 2015 Trends page can be viewed at <http://www.worldwewant2015.org/trends>