

Drivers of Emerging Infectious Disease Events as a Framework for Digital Detection

Technical Appendix

Technical Appendix Table 1. References for available data examples found in the Table in the article text*

Driver theme, data example	Citation
Human susceptibility to infection	
Vaccine rumor surveillance	(1)
U.S. influenza vaccination rates	(2)
Mozambique Health Information System	(3)
Climate and weather	
SAGE (Center for Sustainability and Global Environment)	(4)
Vulnerability to climate change	(5)
Human demographics and behavior	
World Pop	(6)
Economic Development	
International Monetary Fund	(7)
World Bank	(8)
Land use and ecosystem changes	
Global Agricultural Lands	(9)
CIESN (Center for International Earth Science Information Network)	(10)
Global Forest Change 2000–2012	(11)
Global Forest Watch	(12)
Croplands in western Africa	(13)
IMAZON Deforestation Alert System	(14)
Global livestock distributions	(15)
Technology and Industry	
United Nations Global Pulse	(16)
Human wildlife interaction	
Digital news reports	(17)
State-level hunting data	(18)
Breakdown of public health measures	
Natural disasters hotspots	(19)
Poverty and social inequality	
CIESEN (Center for International Earth Science Information Network)	(10)
Global Observatory	(20)
War and famine	
Famine early warning system	(21)
Syria Tracker	(22)
Lack of political will	
Transparency International	(23)
Cline Center for Democracy	(24)
International travel and commerce	
NA	NA

*NA, none available.

Technical Appendix Table 2. References for web platforms mentioned in the text

Web platform	Web site
FluNearYou	https://flunearyou.org/
Influenzanet	https://www.influenzanet.eu/
OPENDREAM – Thailand	https://www.opendream.co.th/
SMS for Life	http://malaria.novartis.com/innovation/sms-for-life/index.shtml
Saude Na Copa 2014	http://www.saudenacopa.com/dashboard/site/termos
Mataki	http://mataki.org/
Arduino Platform	http://www.arduino.cc/
Onset HOBOS	http://www.onsetcomp.com/
Trendalyzer	http://www.gapminder.org/
Esri	http://www.esri.com/
Google Earth Engine	https://earthengine.google.org/#intro

References

1. HealthMap. Vaccine Sentimeter: Global monitoring of vaccination conversations. 2014 Feb 1 [cited 2014 Jun 25]. <http://www.healthmap.org/viss/>
2. US Department of Health and Human Services. Interactive mapping tool: live-tracking flu vaccinations of Medicare beneficiaries. 2014 May 23 [cited 2014 Jun 25]. <http://www.hhs.gov/nvpo/flu-vaccination-map/>
3. World Health Organization. WHO vaccine-preventable diseases: monitoring system. 2014 global summary. 2014 [cited 2014 Jun 25]. http://apps.who.int/immunization_monitoring/globalsummary/estimates?c=MOZ
4. Center for Sustainability and the Global Environment University of Wisconsin–Madison. WHIPS (the Wisconsin Horizontal Interpolation Program for Satellites). 2013 Mar 6 [cited 2014 Jun 25]. <http://www.sage.wisc.edu/download/WHIPS/WHIPS.html>
5. Wheeler D. Quantifying vulnerability to climate change: implications for adaptation assistance. Washington (DC): Center for Global Development; 2011.
6. GeoData Institute, University of Southampton. WorldPop [cited 2014 Jun 25]. <http://www.worldpop.org.uk/>
7. International Monetary Fund. Data and statistics. 2014 [cited 2014 Jun 25]. <http://www.imf.org/external/data.htm>
8. The World Bank. Data. 2014 [cited 2014 Jun 25]. <http://data.worldbank.org/>
9. LUGE (Land Use and the Global Environment) Lab. Data sets. 2013 May 3 [cited 2014 Jun 25]. <http://www.geog.mcgill.ca/~nramankutty/Datasets/Datasets.html>

10. NASA's Socioeconomic Data and Applications Center (SEDAC). World Data Center for Human Interactions in the Environment. 2011 [cited 2014 Jun 25].
<http://sedac.ciesin.columbia.edu/wdc/datapolicy.jsp>
11. Hansen MC, Potapov P, Moore R, Hancher M, Turubanova S, Tyukavina A, et al. High-resolution global maps of 21st-century forest cover change. *Science*. 2013;342:850–3. [PubMed](https://pubmed.ncbi.nlm.nih.gov/244693/)
<http://dx.doi.org/10.1126/science.1244693>
12. World Resource Institute. Global Forest Watch [cited 2014 Jun 25].
<http://www.globalforestwatch.org/>
13. Ramankutty N. Croplands in West Africa: a geographically explicit dataset for use in models. *Earth Interact*. 2004;8:1–22. [http://dx.doi.org/10.1175/1087-3562\(2004\)8<1:CIWAAG>2.0.CO;2](http://dx.doi.org/10.1175/1087-3562(2004)8<1:CIWAAG>2.0.CO;2)
14. Institute of Man and Environment in the Amazon. Publications. 2011 [cited 2014 Jun 25].
<http://www.imazon.org.br/publicacoes>
15. Geo-Wiki. Livestock Geo-Wiki. 2014 [cited 2014 Jun 25]. <http://www.livestock.geo-wiki.org/>
16. United Nations. United Nations Global Pulse. 2014 [cited 2014 Jun 25].
<http://www.unglobalpulse.org/>
17. HealthMap. Wildlife Trade. 2014 [cited 2014 Jun 25]. <http://www.healthmap.org/wildlifetrade/>
18. Illinois Department of Natural Resources. IDNR harvest query. 2014 [cited 2014 Jun 25].
<http://www.dnr.illinois.gov/hunting/Pages/IDNRHarvestQuery.aspx>
19. Center for Hazards and Risk Research at Columbia University. Core data sets. 2005 [cited 2014 Jun 25]. <http://www.ldeo.columbia.edu/chrr/research/hotspots/coredata.html>
20. International Peace Institute. Catalogue of indices. 2014 [cited 2014 Jun 25].
<http://theglobalobservatory.org/indices.html>
21. United States Agency for International Development. Famine Early Warning System Network. [cited 2014 Jun 25]. <http://www.fews.net/>
22. Syria Tracker [cited 2014 Jun 25]. <https://syriatracker.crowdmap.com/>
23. Transparency International. 2014 [cited 2014 Jun 25]. <http://www.transparency.org/>
24. Cline Center for Democracy. Data. 2010 [cited 2014 Jun 25]. <http://www.clinecenter.illinois.edu/data/>
25. Flunearyou [cited 2015 Mar 3]. <https://flunearyou.org/>
26. Influenzanet [cited 2015 Mar 3]. <https://www.influenzanet.eu/>

27. OPENDREAM – Thailand [cited 2015 Mar 3]. <https://www.opendream.co.th/>
28. SMS for Life [cited 2015 Mar 3]. <http://malaria.novartis.com/innovation/sms-for-life/index.shtml>
29. Healthy Cup 2014 [cited 2015 Mar 3]. <http://www.saudenacopa.com/dashboard/site/termos>
30. Mataki [cited 2015 Mar 3]. <http://mataki.org/>
31. Arduino platform [cited 2015 Mar 3]. <http://www.arduino.cc/>
32. HOBOs [cited 2015 Mar 3]. <http://www.onsetcomp.com/>
33. Trendalyzer [cited 2015 Mar 3]. <http://www.gapminder.org/>
34. ESRI [cited 2015 Mar 3]. <http://www.esri.com/>
35. Google Earth Engine [cited 2015 Mar 3]. <https://earthengine.google.org/#intro>