

# CHANGING WHAT COUNTS

**HOW CAN CITIZEN-GENERATED AND CIVIL  
SOCIETY DATA BE USED AS AN ADVOCACY TOOL  
TO CHANGE OFFICIAL DATA COLLECTION?**

Jonathan Gray  
Danny Lämmerhirt  
Liliana Bounegru



# CHANGING WHAT COUNTS



Jonathan Gray is Director of Policy and Research at Open Knowledge and Researcher at the University of Amsterdam; Danny Lämmerhirt is Researcher at Open Knowledge and the University of Amsterdam; Liliana Bounegru is Researcher at the University of Amsterdam, the University of Groningen and the University of Ghent. Profiles of The Counted project and The Migrant Files draw on Liliana's ongoing research around data journalism.



ING

S

# CHANGING WHAT COUNTS



**HOW CAN CITIZEN-GENERATED  
AND CIVIL SOCIETY DATA BE USED  
AS AN ADVOCACY TOOL TO CHANGE  
OFFICIAL DATA COLLECTION?**

Jonathan Gray  
Danny Lämmerhirt  
Liliana Bounegru

# ACKNOWLEDGEMENTS

**We would like to register our gratitude to the following people whom we interviewed, consulted or otherwise drew inspiration from in this project.**

Abbigail Moy, Namati

Lauri Myllyvirta,

Greenpeace International

Mary Goretti Nakabugo,

Twaweza

Sabine Niederer, Hogeschool van

Amsterdam

Christian Nold,

University College London

Benjamin Ooghe-Tabanou, Regards

Citoyens and médialab, Sciences Po

Matthew O'Reilly, Indigo Trust

Katarina Ott, Institute of Public

Finance

René Post, The Green Web

Foundation

Kenton Powell, The Guardian

Megan Price,

Human Rights Data Analysis Group

Kingsley Purdam,

University of Manchester

Irendra Radjawali, University of Bonn

Zara Rahman, The Engine Room

Carlo Ratti, Massachusetts Institute

of Technology SENSEable City Lab

Robin Rice, Radical Statistics Group

Bernhard Rieder,

University of Amsterdam

Richard Rogers,

University of Amsterdam

Rebecca Rumbul,

mySociety

Dan Silver,

Social Action & Research Foundation

Ludi Simpson,

Radical Statistics Group

Amelia Theisen,

Human Trafficking Clinic

Myriam Vandenbroucke, Hivos

Javier de Vega, Civio

Tommaso Venturini, Sciences Po and

King's College London

Stefaan Verhulst,

GovLab, New York University

Rainbow Wilcox,

Africa's Voices Foundation

Mushon Zer-Aviv, oBudget.org

Dieter Zinnbauer,

Transparency International

Vittorio Alvino,

Associazione OpenPolis

Kat Austen,

information innovation lab

Robert Bain, Freelance Journalist

Caelainn Barr, The Guardian

John Bibby, Radical Statistics Group

Kate Bloor, Lyme Research UK

Darko Brkan, Zašto ne?

David Cabo, Civio

Kaitlin Cieran, CGIAR

Izabela Corrêa, London School of

Economics and Political Science

Germán Petersen Cortés,

Transparencia Mexicana

Tim Davies, University

of Southampton

Shannon Dosemagen, Public Lab

John Emerson, Backspace

Jennifer Gabrys,

Goldsmiths, University of London

Maya Indira Ganesh,

Tactical Technology Collective

Emily Gay, Organisation for Economic

Co-operation and Development

Carolin Gerlitz,

University of Amsterdam

Annabelle Giger, Every Casualty

Ellen Greggio, WaterAid

Muki Haklay,

University College London

Rich Harris, The Guardian

Theresa Harris, American Association

for the Advancement of Science

Fieke Jansen,

Tactical Technology Collective

Roman Jauregui, Asociación Civil

Gobierno Abierto Argentina

Nicolas Kayser-Bril, Journalism++

Devlin Kuyek,

GRAIN

Sean Lang,

Greenpeace East Asia

# CONTENTS



|  |           |
|--|-----------|
| <b>INTRODUCTION</b>  | <b>7</b>  |
| <b>CITIZEN SENSE: MAKING THE CONSEQUENCES OF POLLUTION EVENTS<br/>VISIBLE THROUGH CITIZEN SENSING (EUROPE / US)</b>  | <b>10</b> |
| BACKGROUND   | 11        |
| DATA COLLECTION  | 11        |
| OUTCOMES   | 13        |
| <b>THE COUNTED ADVOCATING FOR A COMPREHENSIVE MEASURE<br/>OF PEOPLE KILLED BY POLICE (US)</b>  | <b>16</b> |
| BACKGROUND   | 17        |
| DATA COLLECTION  | 17        |
| OUTCOMES   | 19        |
| <b>THE MIGRANTS' FILES: ADVOCATING FOR EVIDENCE-BASED POLICY<br/>THROUGH COUNTING MIGRATION DEATHS (EUROPE)</b>  | <b>20</b> |
| BACKGROUND   | 21        |
| DATA COLLECTION  | 22        |
| OUTCOMES   | 23        |
| <b>COMMUNITY DRONES: USING CITIZEN MAPPING DATA<br/>TO CHALLENGE OFFICIAL LAND REGISTRIES AND SUPPORT<br/>SOCIAL AND ENVIRONMENTAL JUSTICE (INDONESIA)</b> | <b>24</b> |
| BACKGROUND   | 25        |
| DATA COLLECTION  | 25        |
| OUTCOMES   | 27        |
| <b>WHO IS PARDONED? GENERATING A PUBLIC DATABASE<br/>OF OFFICIAL PARDONS (SPAIN)</b>   | <b>28</b> |
| BACKGROUND   | 29        |
| DATA COLLECTION  | 29        |
| OUTCOMES   | 30        |

|   |           |
|---|-----------|
| <b>UWEZO: ALTERNATIVE MEASUREMENTS<br/>TO EVALUATE LITERACY AND NUMERACY (EAST AFRICA)</b>    | <b>32</b> |
| BACKGROUND  | 33        |
| DATA COLLECTION   | 33        |
| OUTCOMES  | 34        |
| <b>WHO ACTUALLY HAS ACCESS TO WATER?<br/>RECONSIDERING WATER SUPPLY MEASUREMENTS (MALAWI)</b> | <b>36</b> |
| BACKGROUND  | 37        |
| DATA COLLECTION   | 38        |
| OUTCOMES  | 39        |
| <b>DISCUSSION, ANALYSIS AND RECOMMENDATIONS</b>   | <b>41</b> |
| CIVIL SOCIETY VS. INSTITUTIONAL DATA?   | 41        |
| TECHNOLOGIES, METHODS AND STRATEGIES FOR CHANGING<br>WHAT COUNTS                              | 43        |
| RISKS AND LIMITATIONS   | 45        |
| RECOMMENDATIONS   | 46        |
| <b>REFERENCES AND FURTHER READING</b>   | <b>48</b> |

# INTRODUCTION

The information systems of public institutions play a crucial role in how we collectively look at and act in the world. They shape the way decisions are made, progress is evaluated, resources are allocated, issues are flagged, debates are framed and action is taken. As a United Nations (UN) report recently put it, “Data are the lifeblood of decision-making and the raw material for accountability.”<sup>1</sup>

Every information system renders certain aspects of the world visible and lets others recede into the background. Datasets highlight some things and not others. They make the world comprehensible and navigable in their own way – whether for the purposes of policy evaluation, public service delivery, administration or governance.

Given the critical role of public information systems, what happens when they leave out parts of the picture that civil society groups consider vital? What can civil society actors do to shape or influence these systems so they can be used to advance progress around social, democratic and environmental issues?

This report looks at how citizens and civil society groups can generate data as a means to influence institutional data collection. In the following pages, we profile citizen-generated and civil society data projects and how they have been used as advocacy instruments to change institutional data collection – including looking at the strategies, methods, technologies and resources that have been mobilised to this end. We conclude with a series of recommendations for civil society groups, public institutions, policy-makers and funders.

The report was commissioned as part of a research series by DataShift, an initiative that builds the capacity and confidence of civil society organisations to produce and use citizen-generated data. It follows on from another recent discussion paper from Open Knowledge on what can be done to make the “data revolution” more responsive to the interests and concerns of civil society,<sup>2</sup> as well as a briefing note by DataShift on how institutions can support sustainability of citizen-generated data initiatives.<sup>3</sup>

1 UN Data Revolution Group, “A World That Counts: Mobilising the Data Revolution for Sustainable Development”, 2014, <http://www.undatarevolution.org>

2 J. Gray, “Democratising the Data Revolution: A Discussion Paper”, Open Knowledge, 2015, <http://blog.okfn.org/2015/07/09/democratising-the-data-revolution/>

3 C., Wilson and Z. Rahman, “Citizen-Generated Data and Governments. CIVICUS. Towards a Collaborative Model”, 2015, <http://civicus.org/images/citizen-generated%20data%20and%20governments.pdf>

The case studies here are based on qualitative, semi-structured interviews with people who have been directly involved with the projects. Potential case studies were shortlisted through snowball sampling drawing on a combination of interviews and digital methods.<sup>4</sup>

## SUMMARY OF RECOMMENDATIONS

On the basis of our case studies and interviews for this report, we suggest **civil society actors** who are interested in influencing the data collection practices of public institutions:

### CIVIL SOCIETY

**COLLECT DATA ON ISSUES THEY CARE ABOUT** as a means to secure recognition and action around them. This could include sample data in order to ascertain data collection priorities.

**IDENTIFY AND BUILD ALLIANCES WITH ACTORS WITH A STAKE IN THEIR ISSUE**, including through coalitions of local residents, citizens and civil society groups. Engagement with these groups may include data literacy and educational activities in order to stimulate and support alternative data collection practices.

**ESTABLISH CONTACT WITH RELEVANT PUBLIC INSTITUTIONS WHERE APPROPRIATE**, in order to highlight gaps and limitations with official data as well as to make the case for changes. This depends on the data and the institution in question and may not be a suitable move for all groups (e.g. where there are risks of flagging unwanted attention).

**DOCUMENT AND SHARE THEIR TECHNOLOGIES, METHODS AND ADVOCACY STRATEGIES WITH OTHER CIVIL SOCIETY GROUPS WHERE APPROPRIATE**, so others can draw on their experiences.

**TAKE STEPS TO REDACT SENSITIVE OR PERSONALLY IDENTIFYING INFORMATION IN DATA THEY GENERATE**, in order to protect the privacy of individual citizens and civil society groups that contribute to data collection. This might include through designing data infrastructures with privacy in mind, using encryption tools and seeking advice from privacy and digital rights groups, or more broadly engaging in responsible data practices.

4 R. Rogers, *Digital Methods*, 2013, Cambridge, MA: MIT Press



---

We suggest **public institutions, policy-makers and funders** interested in making public data infrastructures more responsive to the concerns of civil society actors:

## INSTITUTIONS & POLICY-MAKERS

**RECOGNISE THAT CITIZEN-GENERATED DATA AND CIVIL SOCIETY DATA CAN PLAY A DIFFERENT AND COMPLEMENTARY ROLE TO PUBLIC SECTOR DATA.**

They should look for ways to engage with, acknowledge and support these initiatives.

**INVESTIGATE FUNDING AND SUSTAINABILITY MODELS FOR CITIZEN-GENERATED DATA AND CIVIL SOCIETY DATA.**

In many cases, citizen-generated data should be considered complementary to institutional data collection – rather than as a pretext to stop or reduce funding for the latter.

**SUPPORT CONSULTATION AND PARTICIPATION PROCESSES TO ENABLE CIVIL SOCIETY INPUT REGARDING INSTITUTIONAL DATA COLLECTION,**

including through events, responsive communication channels and participatory design processes.

**SUPPORT FURTHER RESEARCH AND THE DEVELOPMENT OF RESOURCES**

**IN THIS AREA** that can be used to make public data infrastructures more responsive to the interests and concerns of civil society.

---

# CITIZEN SENSE

**MAKING THE CONSEQUENCES OF POLLUTION  
EVENTS VISIBLE THROUGH CITIZEN SENSING  
(EUROPE / US)**



CITIZEN  
SENSE



## BACKGROUND

The Marcellus Shale is a geological formation said to account for around 40% of shale gas production in the United States (US).<sup>5</sup> As of 2003, companies began experimenting with hydraulic fracturing, or “fracking”, in order to extract natural gas from this region. Since then, it is estimated that over 17,000 permits have been issued for new drilling sites.<sup>6</sup> Since drilling began, there have been a number of high-profile controversies about the negative effects of fracking on public health and the environment – including water contamination, air pollution and radioactive waste products, as well as increased rates of hospitalisations and prevalence of diseases and birth defects.<sup>7</sup>

While public institutions had some data collection infrastructures in place, residents around the Marcellus Shale in Pennsylvania felt these were inadequate to keep track of the consequences of local pollution events that might affect their lives. In particular, they were concerned about the lack of initiatives to monitor air quality and potential airborne pollutants from fracking. In response to this, the Citizen Sense project coordinated a series of activities with residents in northeast Pennsylvania from 2013 to 2015. These culminated in the development of a Citizen Sense Kit, which was used to monitor air quality and provide evidence to inform discussion between citizen groups, public institutions and companies.<sup>8</sup>

## DATA COLLECTION

Based on discussions, workshops, “frack walks” and other activities with residents, the Citizen Sense project aimed to provide a flexible toolkit to facilitate a wide range of “citizen sensing” and data collection practices. The kits included a range of monitoring devices – from passive air sampling badges to a custom prototype device called “the Frackbox” – as well as logbooks and guidance for producing other forms of documentation such as photographs, mobile video and diaries. Devices were designed to be inconspicuous, in order to avoid attracting unwanted attention from companies and other residents. Development of the kit responded to the needs and experiences of residents – and feedback from deployments has led to various changes and design improvements.<sup>9</sup>

5 According to estimates from the US Energy Information Administration (EIA), Marcellus Region Production Continues Growth. Today in Energy, August 5, 2014, <http://www.eia.gov/todayinenergy/detail.cfm?id=17411>

6 <https://www.marcellusgas.org/>

7 See, for example, L.W. Kille, “Fracking, Shale Gas and Health Effects”, Research Roundup, November 14, 2014, <http://journalistsresource.org/studies/environment/energy/fracking-shale-gas-health-effects-research-roundup>

8 See J. Gabrys and H. Pritchard, “Next-Generation Environmental Sensing: Moving Beyond Regulatory Benchmarks for Citizen-Gathered Data”, in Berre, A. J., Schade, S. and Piera, J. (Eds) Proceedings of the Workshop Environmental Infrastructures and Platforms 2015, Barcelona, October 28-30, 2015, <http://ecs.a.citizen-science.net/sites/ecs.a.citizen-science.net/files/ENVIP-2015-Draft-Binder.pdf>

9 See Citizen Sense, Citizen Sense Monitoring Events in Pennsylvania, <http://www.citizensense.net/sensors/citizen-sense-monitoring-kit-pennsylvania/>



"Frackbox"  
from Citizen  
Sense project:  
[http://www.  
citizensense.net](http://www.citizensense.net)

In the first instance the kits were distributed to 30 local residents; local community group Breathe Easy Susquehanna County then also used them. Combining information generated with the kits with local expertise from residents and data from other sources enabled participants in the project to build up a detailed picture of the character and changes to air quality surrounding fracking facilities over a three- to six-month period.<sup>10</sup> Data from the pollution sensing project is also made available through an online visualisation tool, based on open source software for monitoring air quality data.<sup>11</sup>

The Citizen Sense project – led by Dr Jennifer Gabrys at Goldsmiths, University of London, and supported by the European Research Council– is also developing other devices, toolkits and materials for other areas, including wild sensing (to detect flora and fauna) and urban sensing (towards more green and sustainable cities).

<sup>10</sup> See J. Gabrys and H. Pritchard, "Next-Generation Environmental Sensing: Moving Beyond Regulatory Benchmarks for Citizen-Gathered Data", in Berre, A. J., Schade, S. and Piera, J. (Eds) Proceedings of the Workshop Environmental Infrastructures and Platforms 2015, Barcelona, October 28-30, 2015, <http://ecsa.citizen-science.net/sites/ecsa.citizen-science.net/files/ENVIP-2015-Draft-Binder.pdf>

<sup>11</sup> See Citizen Sense, Data Analysis Toolkit, <http://www.citizensense.net/resources/data-visualization-tool/>

Air pollution monitoring devices used as part of Citizen Sense pilot study in New Cross, London.



## OUTCOMES

According to the project team, data generated through the Citizen Sense Kit became “a useful negotiation tool” with local bodies, non-profit organisations and political representatives.<sup>12</sup> According to Project Coordinator Jennifer Gabrys, “Citizen monitoring has led to follow-up monitoring from institutions,” which was a key objective of many residents and community groups.<sup>13</sup> As Gabrys further argues, institutional acknowledgement was an important aim for the residents for two reasons: air monitoring stations are concentrated in urban instead of rural areas (owing to population density); and unconventional natural gas extraction is also not subject to usual air pollution regulations.<sup>14</sup> In this sense, the project succeeded in changing the scope of official data collection practices by introducing new pollution monitoring activities to sites of specific concern to local residents.

<sup>12</sup> See J. Gabrys and H. Pritchard, “Next-Generation Environmental Sensing: Moving Beyond Regulatory Benchmarks for Citizen-Gathered Data”, in Berre, A. J., Schade, S. and Piera, J. (Eds) Proceedings of the Workshop Environmental Infrastructures and Platforms 2015, Barcelona, October 28-30, 2015, <http://ecsa.citizen-science.net/sites/ecsa.citizen-science.net/files/ENVIP-2015-Draft-Binder.pdf>

<sup>13</sup> Interview with Jennifer Gabrys.

<sup>14</sup> Interview with Jennifer Gabrys.

However, using data generated through citizen sensing practices has not been without its difficulties. Participants in the project struggled to obtain recognition for their data collection practices, and there was wariness about the quality and character of their data as compared with information generated through the scientific instruments and methodologies of public institutions engaged in air pollution monitoring.

In response to concerns about data quality, Gabrys and her colleagues at the Citizen Sense project have highlighted the multiple contexts of usage for datasets – countering that not all datasets need to comply with the strict regulatory requirements of official bodies, and that citizen sensing data can help flag pollution events that might require further monitoring. They propose the idea of “just good enough” data that highlights a trend, gives an indication or starts a process of public conversation or collective exploration rather than aiming to provide an absolute measurement.<sup>15</sup> Citizen sensing practices may also contribute to new kinds of “environmental citizenship” or dynamics of engagement between citizens, civil society groups, public institutions and other actors. The project in Pennsylvania demonstrated how citizen sensing could lead to novel forms of interaction and evidence creation, complementary to the provision of accurate quantitative information by experts and institutions.

---

**“Just good enough data’ ... creates a shared space for discussion that can communicate community awareness of pollution events to regulators.”**

Jennifer Gabrys and Helen Pritchard, Citizen Sense project, Goldsmiths, University of London

---

Gabrys suggests some environmental agencies are beginning to recognise that, “The reasons people monitor are varied and complex,” and that there are different data collection practices, which don’t all have to comply with regulatory requirements and which might use different technologies and methods from public institutions. She suggested some parts of public institutions (such as research and development departments) may have more of an interest in citizen-generated data than others (such as those focused on regulatory compliance).

 15 Interview with Jennifer Gabrys.


---

**“Citizen monitoring has led to follow-up monitoring from institutions”**

Jennifer Gabrys, Principal Investigator of Citizen Sense project  
and Reader, Goldsmiths, University of London

---

She also raised the concern that many public institutions were underfunded and not able to deal with the “deluge of data” citizens generated. Some institutions in other countries had even expressed an interest in retiring official data collection operations and using citizen-generated data instead. Hence, she argued, it was vital that citizen-generated data be seen as “augmenting, supplementing and providing different insights” to official data, rather than as “replacing or displacing” it. This could be seen as part of a broader process of “opening up institutions to a wider set of practices for gathering evidence about air pollution”.<sup>16</sup>

 16 Interview with Jennifer Gabrys.

# THE COUNTED

ADVOCATING FOR A COMPREHENSIVE  
MEASURE OF PEOPLE KILLED BY POLICE (US)



THE  
COUNTED



## BACKGROUND

In June 2015, *The Guardian* US launched a large-scale counting operation to more comprehensively record cases of killings by the police in the US. The project was initiated as a response to the systematic underreporting of homicides by law enforcement officers and the absence of solid mechanisms to record and aggregate such incidents at national level. The count currently covers incidents that occurred in the year 2015, over 1,000 at the time of the writing of this report, and it is ongoing. This absence of robust official data collection mechanisms to record killings by police and other law enforcement agencies at country level gained urgency with the media and civil society in the year following the shooting of Michael Brown in Ferguson, Missouri. Former US Attorney General Eric Holder has described the situation as “unacceptable”.<sup>17</sup> Currently in place is a voluntary submission system run by the Federal Bureau of Investigation whereby law enforcement agencies may submit their “justifiable homicides” count annually.<sup>18</sup> Such a voluntary system resulted in only 1,100 police departments out of 18,000 submitting a report between 2005 and 2012.<sup>19</sup> The resulting government counts of police killings based on this system have been found to underreport the actual number of police killings by more than half.<sup>20</sup> In an interview about their motivation for the project, journalists from *The Guardian* told us, “It’s indefensible that the federal government isn’t able to accurately track police killings, meaning it’s impossible to have meaningful conversations about police tactics and training, let alone thornier questions about systemic racism in policing.”<sup>21</sup>

## DATA COLLECTION

The Counted project complements several other attempts by journalists and activists to produce databases of police killings. These include Killed by Police, a website that monitors news reports of police killings as of 2013;<sup>22</sup> Fatal Encounters, an initiative to collect data on police killings at national level based on requests for public records, crowdsourcing and other databases;<sup>23</sup> and *The Washington Post*’s own database of fatal police shootings.<sup>24</sup>

17 See US Department of Justice, “Attorney General Holder Urges Improved Data Reporting on Both Shootings of Police Officers and Use of Force by the Police”, *Justice News*, January 15, 2015, <http://www.justice.gov/opa/pr/attorney-general-holder-urges-improved-data-reporting-both-shootings-police-officers-and-use>

18 FBI, “Crime in the United States, 2012”, 2013, <https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/offenses-known-to-law-enforcement/expanded-homicide/expandhomicidemain>

19 *The Guardian*, “About the Project. What is The Counted?”, 2015, <http://www.theguardian.com/us-news/ng-interactive/2015/jun/01/about-the-counted>

20 T. McCarthy, “Police Killed More than Twice as Many People as Reported by US Government”, *The Guardian*, March 4, 2015, <http://www.theguardian.com/us-news/2015/mar/04/police-killed-people-fbi-data-justifiable-homicides>

21 Interview with Rich Harris, Kenton Powell, Jamiles Lartey and Oliver Laughland.

22 <http://killedbypolice.net/>

23 <http://www.fatalencounters.org/>

24 *The Washington Post*, 980 People Shot Dead by Police This Year, 2015, <https://www.washingtonpost.com/>

The Counted aims to add to these projects, according to the journalists behind it, with increased accessibility and relevance to a wide audience.<sup>25</sup> In relation to *The Washington Post's* initiative, which focuses on a single type of violent act – shootings – they explained “We decided against that route as it excludes many cases where people died after being struck by vehicles, shocked with Tasers, or while in custody.”<sup>26</sup>

The project collects and cross-references data from a number of sources – including police reports, witness statements, media reports and other media and civil society organisation counting initiatives – to identify instances of police killings. According to the project team, the biggest source of information so far has been reader submissions via email and the submission form,<sup>27</sup> as well as through Twitter monitoring and Google Alerts.<sup>28</sup> This data is extensively verified against information contained in public records and held by police departments and coroner’s offices. Demographic details such as age, gender and ethnicity are recorded for each victim, as well as details of the incident such as the police departments involved and the status of the investigation.

Central to *The Guardian's* data collection model is community-building, towards which the project takes a multi-layered approach. Regarding this, those behind it say, “We want the journalism itself to reach the widest possible audience who are interested. Then we want the people within that who care deeply about this issue to develop a longer-term relationship with the project. We want people who have something important to contribute to be only a few steps away from our reporters (in Kevin Bacon terms) so that information reaches us promptly.”<sup>29</sup> For this reason, the project has set up a webpage dedicated to sending tips, as well as a Twitter account and a Facebook page, and has optimised the architecture and design of the website for sharing individual stories and graphics on social media. The ambition of the project is to transition towards a “verified crowdsourcing system,” whereby witnesses of police killings or those informed of such incidents report them to *The Guardian* in order to build a more accurate and comprehensive database.

[graphics/national/police-shootings/;](#)

25 Interview with Rich Harris, Kenton Powell, Jamiles Lartey and Oliver Laughland.

26 Interview with Rich Harris, Kenton Powell, Jamiles Lartey and Oliver Laughland.

27 <http://www.theguardian.com/thecounted/tips>

28 Interview with Rich Harris, Kenton Powell, Jamiles Lartey and Oliver Laughland. See also J. Swaine, O. Laughland and J. Lartey, “We’re *the Guardian* Reporters behind The Counted, a Project to Chronicle Every Person Killed by Police in the US”, Reddit, 2015, [https://www.reddit.com/r/IAMA/comments/3br3j6/were\\_the\\_guardian\\_reporters\\_behind\\_the\\_counted\\_a/](https://www.reddit.com/r/IAMA/comments/3br3j6/were_the_guardian_reporters_behind_the_counted_a/)

29 M. Hamilton, “Crowdsourcing The Counted: How *The Guardian* Aims to Put the Audience at the Heart of Its Journalism”, *NiemanLab*, June 17, 2015, <http://www.niemanlab.org/2015/06/crowdsourcing-the-counted-how-the-guardian-aims-to-put-the-audience-at-the-heart-of-its-journalism/>

## OUTCOMES

The journalists behind the project suggest the type of data collection effort in which they are engaged in “should be done ‘officially’”.<sup>30</sup> And indeed, in terms of impact on official data collection practices, at the beginning of October 2015 the US Department of Justice announced a programme to develop more robust methodologies and national standards to collect information on use of force and killings by law enforcement. The programme is testing new methodologies similar to *The Guardian’s* and those of other initiatives to derive information from “open source records” – that is, publicly available sources such as news reports – and verify it against records maintained by police departments, medical examiners and investigative offices.<sup>31</sup> The Counted is reported as one of the sources of information that will be monitored as part of this programme. *The Guardian* reports that the methodology proposed is “near-identical to the one employed by The Counted”.<sup>32</sup>

---

**“We want the people ... who care deeply about this issue to develop a longer-term relationship with the project. We want people who have something important to contribute to be only a few steps away from our reporters ... so that information reaches us promptly.”**

Mary Hamilton, *The Guardian* US

---

30 Interview with Rich Harris, Kenton Powell, Jamiles Lartey and Oliver Laughland.

31 US Department of Justice, “Attorney General Lynch: Use-of-Force Data is Vital for Transparency and Accountability”, *Justice News*, October 5, 2015, <http://www.justice.gov/opa/pr/attorney-general-lynch-use-force-data-vital-transparency-and-accountability>

32 O. Laughland, J. Swaine, C. McCarthy and J. Lartey, “Justice Department Trials System to Count Killings by US Law Enforcement”, *The Guardian*, October 5, 2015, <http://www.theguardian.com/us-news/2015/oct/05/justice-department-trials-system-count-killings-us-law-enforcement-the-counted>

# THE MIGRANTS' FILES

ADVOCATING FOR EVIDENCE-BASED POLICY  
THROUGH COUNTING MIGRATION DEATHS  
(EUROPE)



THE  
MIGRANTS'  
FILES



---

**Le travail de Frontex, c'est la lutte contre l'immigration illégale, pas le sauvetage en mer, et ces gens-là sont morts, ce ne sont plus des migrants.** Anonymous member of Frontex, EU agency to coordinate European border management.<sup>33</sup>

---

The Migrants' Files was started in 2013 as a journalistic effort to "to acquire reliable, comprehensive data on the deaths of migrants seeking to enter Europe",<sup>34</sup> after journalists realised no national, European or international institutions had mechanisms in place to systematically collect data on migrants' deaths. Today, it is "the most comprehensive survey of European migration fatalities available".<sup>35</sup> The project is coordinated by Journalism++ and powered by a European consortium of data journalism agencies, media outlets, freelance journalists, researchers and students, partly sustained by a journalism grant-giving organisation.<sup>36</sup> According to Project Coordinator Nicolas Kayser-Bril, while a number of non-governmental organisations (NGOs) and government bodies maintained some data on this topic, the tendency was to under-record, as the employed methodologies for counting deaths were aligned with institutional missions. For example, national governments tended to record events that happened within their national borders, while those happening *en route* but outside the national boundaries remained unrecorded. Moreover, the European agency in charge of European Union (EU) border security coordination, Frontex, collects data only on intercepted migrants and refugees and not on those migrants who died on the way to Europe.<sup>37</sup>

33 The mission of Frontex is the fight against illegal immigration not rescue at sea, and those people died, they are no longer migrants.

34 <http://www.themigrantsfiles.com/>

35 N. Kayser-Bril, "The Migrants Files: A Quantitative Approach to Migration Policy", Border Criminologies blog, April 5, 2014, <https://www.law.ox.ac.uk/research-subject-groups/centre-criminology/centreborder-criminologies/blog/2014/05/migrants-files>

36 Contributing organisations include Journalism++ SAS, Journalism++ Stockholm, Dataniņa, Neue Zürcher Zeitung, El Confidencial, Sydsvenskan and Radiobubble. Contributing freelance journalists include Alice Kohli, Jean-Marc Manach and Jacopo Ottaviani. The project is partly financed by Journalismfund.eu.

37 J.-M. Manach, Ces gens-là sont morts, ce ne sont plus des migrants, *Monde Diplomatique*, March 31, 2014, <http://www.monde-diplomatique.fr/carnet/2014-03-31-morts-aux-frontieres>

## DATA COLLECTION

---

**“The goal of the project changed as the investigation progressed ... the story was not about the data we had but about the data we didn’t have.”**

Nicolas Kayser-Bril, Co-founder of Journalism++  
and Coordinator of The Migrant Files

---

According to Kayser-Bril, “The goal of the project changed as the investigation progressed: we originally thought that we would structure existing information in order to geolocate it to have mortality rates by group and tell a story and then realised that there is something more to it and that the story was not about the data we had but about the data we didn’t have.”<sup>38</sup>

Production of the database represented an effort of aggregating data from publicly available sources, structuring it, verifying it and geocoding it. One of the major findings was that numbers of migrant casualties were significantly higher than public estimates on the topic. More than 23,000 migrants died between 2000 and 2013 trying to reach Europe. Two major sources of data have contributed to the original Migrants’ Files database. The first is a list of 22,394 migrant and refugee deaths in the attempt to enter Europe since 1993, maintained by the NGO network UNITED for Intercultural Action.<sup>39</sup> The second is a blog by an Italian journalist who maintains a list of events resulting in deaths or disappearances of migrants on their way to Europe based on reports from news media from 1988 to 2009.<sup>40</sup>

A few steps were essential in producing and maintaining the database of migrant deaths. The first was to convert the information recorded by the principal sources into machine-readable data on which calculations could be performed. This process took two person months for the original database. Defining an ontology or data structure was crucial to this step. The decision was taken that the central unit of the data structure would be the event during which a migrant lost their life in an attempt to travel to or stay in Europe. In terms of scope, it was decided to start monitoring deaths from 2000 and to geographically focus on events *en route* to Europe, as opposed to only those that happened within the national boundaries of EU countries or at the borders of the EU.

38 Contributing organisations include Journalism++ SAS, Journalism++ Stockholm, Dataniinja, Neue Zürcher Zeitung, El Confidencial, Sydsvenskan and Radiobubble. Contributing freelance journalists include: Alice Kohli, Jean-Marc Manach and Jacopo Ottaviani. The project is partly financed by Journalismfund.eu.

39 UNITED for Intercultural Action, The Fatal Policies of Fortress Europe, <http://www.unitedagainstracism.org/campaigns/refugee-campaign/fortress-europe/>

40 G. Del Grande, “Death at the Border. Press Review 1988-2009”, *Fortress Europe* blog, January 14, 2010, <http://fortresseurope.blogspot.nl/2006/01/press-review.html>

Another important step in the production of the database was verification. Journalists from various EU countries collaborating on the project engaged in verifying data for randomly selected events in their countries, more specifically details such as the numbers and causes of death. Methods from the intelligence community, so-called “open source intelligence” methods to identify relevant information from publicly available sources, be they online or public institutions, were essential in this process.<sup>41</sup> To complement this data and keep the database up-to-date, the consortium uses a news aggregation and entity extraction service, Puls, to identify new events and mortality records.<sup>42</sup> The database is made available under the Open Database License to enable others to use and build on the work – with the requirement that they continue to openly share their results.<sup>43</sup>

## OUTCOMES

The project has successfully reached its objective of putting this issue on the media’s agenda and supplying journalists, media organisations and civil society groups with data needed for advocacy and reportage around this issue. The project was a winner of the Data Journalism Awards 2014 and of the Journalism Press Prize 2015, and the media has cited the death count the project has established so extensively that the project no longer maintains a list of media coverage.<sup>44</sup> However, the project has had mixed results when it comes to changing migration policy and advocating for establishing sustained official measurement mechanisms around this issue.

Major international organisations such as the International Organization for Migration (IOM) have utilised the data in their reports and have started their own mortality count operations. For example, a 2014 report from the IOM, “Fatal Journeys: Tracking Lives Lost during Migration”, utilises Migrants’ Files data on deaths between 2000 and 2013.<sup>45</sup> An adapted version of the Migrants’ Files data is also published on the IOM website under the historical data section.<sup>46</sup> EU reactions and policies on this issue have remained contradictory, however, and diverging interests have prevented the mortality data from being integrated with policy-making so far, according to interviews we conducted with the project coordinators as well as an article from *Deutsche Welle* on the European Commission’s official response to the project.<sup>47</sup>

41 [https://en.wikipedia.org/wiki/Open-source\\_intelligence](https://en.wikipedia.org/wiki/Open-source_intelligence)

42 <http://puls.cs.helsinki.fi/static/index.html>

43 <http://opendatacommons.org/licenses/odbl/1.0/>

44 Interview with Nicolas Kayser-Bril.

45 IOM, *Fatal Journeys. Tracking Lives Lost during Migration*, Geneva: IOM, 2014,

[https://publications.iom.int/system/files/pdf/fataljourneys\\_countingtheuncounted.pdf](https://publications.iom.int/system/files/pdf/fataljourneys_countingtheuncounted.pdf)

46 <http://missingmigrants.iom.int/en/historical-data>

47 J. Seiffert, “Migrant Files: The EU’s Refugee Victims”, *Deutsche Welle*, April 15, 2014, <http://www.dw.com/en/migrant-files-the-eus-refugee-victims/a-17566611>



# COMMUNITY DRONES

**USING CITIZEN MAPPING DATA TO CHALLENGE  
OFFICIAL LAND REGISTRIES AND SUPPORT  
SOCIAL AND ENVIRONMENTAL JUSTICE  
(INDONESIA)**

# COMMUNIT DRONES



## BACKGROUND

In Indonesia, extractive industries like bauxite mining or palm oil companies are allowed to operate in certain legally designated areas.<sup>48</sup> Civil society organisations such as the Swandiri Institute argue concessions are granted to these industries without the knowledge or consent of the people living in affected areas. The lack of clear territorial definitions combined with a lack of acknowledgement of communal property rights has led to conflicts between businesses and local communities as well as accusations of “land grabbing”.<sup>49</sup>

Public institutions use maps and other geospatial data sources in order to administer these territories. The Indonesian government has a legal obligation to ensure land use is appropriate to the legally designated land type and the different interests of government, the private sector and local communities are balanced. However, information about land type, land usage and land ownership can often be incomplete, overlapping or contradictory, aggravating disputes and leading to inadequate social and environmental protections.

In the past, civil society organisations have used participatory mapping to challenge official information about these lands. One positive outcome is the Ancestral Domain Registration Agency, which enables indigenous communities to register their ancestral territories. The Indonesian government has officially acknowledged the maps of these territories.<sup>50</sup>

## DATA COLLECTION

A group of researchers from Bonn University and Bremen University, Germany – including Irendra Radjawali, Martin Lukas, Julia, Oliver Pye and Michael Flitner – used unmanned aerial vehicles (drones) as an alternative approach to participatory mapping. The use of so-called “community drones” promised to deliver high-resolution images of territories, residential areas, farming, fruit tree forests and other long-term uses of the land that community members could easily gather and use for advocacy purposes.<sup>51</sup> Their research was executed in Indonesia’s Tayan Hilir district, West Kalimantan province, together with villagers of Sejotang and Subah villages. The Swandiri Institute and the Dayak Customary Council represented the indigenous population in the area.

48 SETAPAK, “Indirect Drivers”, 2016, <http://programsetapak.org/key-issue/indirect-drivers/>

49 P. Sabarini, “NGO Maps out Indigenous Community Territories”, *The Jakarta Post*, June 23, 2013, <http://www.thejakartapost.com/news/2013/06/24/ngo-maps-out-indigenous-community-territories.html>

50 TEBTEBBA, “Indonesian Government Accepts Ancestral Domain Maps”, November 14, 2012, <http://www.tebtebba.org/index.php/content/238-indonesian-government-accepts-ancestral-domain-maps-making-indigenous-peoples-visible-within-the-nation-state>

51 I. Radjawali and O. Pye, “Counter-Mapping Land Grabs with Community Drones in Indonesia. Conference: Land Grabbing, Conflict and Agrarian-Environmental Transformations: Perspectives from East and Southeast Asia, Chiang Mai, June 5-6, 2015

Villagers were engaged to create their own cartographic material, to gather evidence of ecological damage and to represent their interests facing the expansion of oil palm plantations and mining companies. Specifically, they surveyed environmental damage caused by a bauxite mining company in the area close to Sejotang village. Drone-generated maps (or “counter-maps”) were used to provide evidence that the mining company was operating illegally (see picture below) and causing serious ecological damage to a lake nearby, but also to support the local community’s efforts to protect its ancestral lands and forest from illegal appropriations by companies. The data also revealed territorial conflicts between Sejotang village and another bordering village, which were competing about mining resources as a result of poorly defined village borders and a lack of transparency in spatial planning processes and politics in Indonesia.

The research group used freely accessible information on the internet to build their first drone. According to the team, self-made drones are relatively cheap to acquire and the data is relatively easy to collect and use. After taking footage with a drone, it is possible to download images and videos directly onto a laptop in order to obtain an immediate snapshot of territories. As the researchers document in one of their papers on the case study, this footage was used in village meetings and gave the communities a sense of empowerment.<sup>52</sup>

The project involved 30 villagers in setting up the drone and electing a responsible person to conduct the mapping. Villagers were trained in workshops on the concept and practices of participatory mapping – including on the use and the operation of drones to support rapid, participatory counter-mapping initiatives to obtain high-quality spatial data about sites of interest. The initiative was funded by residents – such that each different part of the village contributed around \$50 to the project. Partnering with the Swandiri Institute permitted the involvement of additional NGOs and single NGO activists working on advocacy of community land ownership.

---

Community drone footage was used as legal evidence in a Constitutional Court trial in 2014 to demonstrate that mineral and coal mining companies weren’t complying with regulations.

---

52 I. Radjawali and O. Pye, “Counter-Mapping Land Grabs with Community Drones in Indonesia. Conference: Land Grabbing, Conflict and Agrarian-Environmental Transformations: Perspectives from East and Southeast Asia, Chiang Mai, June 5-6, 2015

Drone footage showing illegal mining activities operating outside of the concession area: I. Radjawali and O. Pye, "Counter-Mapping Land Grabs with Community Drones in Indonesia." Conference: Land Grabbing, Conflict and Agrarian-Environmental Transformations: Perspectives from East and Southeast Asia, Chiang Mai, June 5-6, 2015.



## OUTCOMES

In May 2015, official representatives of Sejotang and Subah villages and members of the community drones project met with local parliament members. This resulted in political support for the initiative. Maps made by community drones in Tayan were successful in obtaining recognition for community-managed lands and customary community rights. The maps of ancestral domains acknowledged by the government in 2012 served as vital evidence for the community to show their land rights had been violated. Other local governments are now consulting with the initiative to clarify whether their spatial planning interferes with communal rights. Community drone footage was used as legal evidence in a Constitutional Court trial in 2014 to demonstrate that mineral and coal mining companies weren't complying with regulations that prescribe the installation of smelters to refine raw materials before exporting them. The Constitutional Court trial is an important precedent to broaden the base of evidence on land disputes, demonstrating the potential of citizen data to challenge unfair and inadequate information collection practices by public institutions. These initiatives demonstrate how drone footage can be used as an advocacy tool to challenge the inadequacies of existing forms of data collection. Citizen-generated data from drones was used to advance a civil society agenda to change the classification and administration of territories. Civil society organisations are continuing to build on this work. The Swandiri Institute has extended its educational programmes and founded several so-called "drone schools" to engage a larger audience around this topic.

# PARDONED?

GENERATING A PUBLIC DATABASE  
OF OFFICIAL PARDONS (SPAIN)



WHO IS  
PARDONED



## BACKGROUND

A law from the 19th century gives the Spanish state discretion to grant official pardons.<sup>53</sup> There have been a number of controversies about the lack of transparency and accountability around how these pardons are granted, to whom and why. For example, in 2011 the chief executive of one of Spain's biggest banks was granted a pardon after a 17-year criminal case.<sup>54</sup> In 2012, five police officers convicted of torture, injury and illegal detention received a pardon that was widely criticised.<sup>55</sup> There is currently no legal requirement to answer requests about the process of pardoning, nor is the Spanish government obligated to explain the reasons for a pardon. When the civil society organisation Civio started its work in 2012, there was no freedom of information law ensuring access to governmental information. Earlier requests by Civio to the Ministry of Justice have remained unanswered.<sup>56</sup> However, the government did have to publish official notifications of pardons in the *Boletín Oficial del Estado*, Spain's official gazette.

## DATA COLLECTION

Civio started in 2012 as an organisation focused on the technical implementation of open data in collaboration with governments. At the end of 2012, it shifted its focus from supporting the accessibility of data towards investigative data journalism. Through its data journalism projects, the organisation has aimed to increase the transparency and accountability of public institutions. To investigate the case of governmental pardons, a co-founder of Civio, David Cabo, downloaded all webpages of the *Boletín Oficial del Estado* dating back to 1996, built a text scraper and extracted text passages mentioning pardons to create an unprecedented comprehensive list.<sup>57</sup>

53 Noticias Jurídicas, Ley de 18 de junio de 1870, de Reglas para el ejercicio de la Gracia de indulto, [http://noticias.juridicas.com/base\\_datos/Penal/lregi.html](http://noticias.juridicas.com/base_datos/Penal/lregi.html)

54 V. Mallet, Santander Chief Pardoned in 17-Year-Old Case, The Financial Times, November 12, 2011, <http://www.ft.com/cms/s/0/c7dee9b6-1764-11e1-b20e-00144feabdc0.html#axzz3tGCz2qow>

55 J. García, Indultados los cinco "mossos" condenados por torturar a un rumano, El País, February 17, 2012, [http://ccaa.elpais.com/ccaa/2012/02/17/catalunya/1329502498\\_773998.html](http://ccaa.elpais.com/ccaa/2012/02/17/catalunya/1329502498_773998.html)

56 Interview with David Cabo, Civio.

57 Interview with David Cabo, Civio.

The website of the *Boletín Oficial del Estado* contains legal texts that document pardons in a regular format using similar juridical expressions for each pardon. Civio used this archive to scrape the texts for essential details such as the name of a pardoned person, the crime they had committed, the sentence received, the type of pardon, the adjusted sentence after the pardon or the name of the minister providing the pardoning.<sup>58</sup> Later, this information was analysed and written up in the form of short journalistic reports that could be sent to media outlets. The site *El Indultómetro* was launched in early 2014 and contains all data on pardons together with data visualisations and journalistic reports.<sup>59</sup>

## OUTCOMES

Civio mainly targeted media outlets with its findings, in order to promote evidence on pardons and to stimulate a sustained public debate around this topic. However, owing to the absence of access to information laws, Civio was unable to formally request or systematically track pardons. Given the absence of an official public database, the Ministry of Justice recommended Civio's database to journalists who wanted to conduct investigations around this topic. Thus a database generated by civil society – in this case through scraping and aggregating information from public records – was successfully used as an advocacy tool to obtain official institutional recognition for concerns about the lack of transparency and accountability in official pardoning processes. Scattered public records were transformed into a useful resource for advocacy and journalistic investigation to make this problem visible.

David Cabo states that Civio has become the main reference for pardons in Spain and several media outlets have used *El Indultómetro* to report on the issue.<sup>60</sup> While years ago there was a lack of comprehensive data on pardons, now Civio publishes and discusses pardons publicly as soon as they are released in the *Boletín Oficial del Estado*. A series of controversies and increased public scrutiny around official pardons have led politicians to take a tougher stance on them. Civio measured that the number of pardons had dropped from about 500 per year to 87 in 2014.<sup>61</sup>

58 See Github: <https://github.com/civio/indultometro/blob/master/data/indultos.csv>

59 <http://elindultometro.es>

60 Interview with David Cabo, Civio; also see [http://www.elconfidencial.com/espana/2014-03-13/gallardon-miente-concedio-ocho-indultos-en-casos-de-corrupcion\\_101641/](http://www.elconfidencial.com/espana/2014-03-13/gallardon-miente-concedio-ocho-indultos-en-casos-de-corrupcion_101641/) and: [http://www.cuatro.com/diario-de/redaccion-de-diario-de-programa-4-indulto/Redaccion\\_de\\_Diario\\_De-indultos-David\\_Reboredo-Alfredo\\_Saenz-Mercedes\\_Mila\\_2\\_1841205065.html](http://www.cuatro.com/diario-de/redaccion-de-diario-de-programa-4-indulto/Redaccion_de_Diario_De-indultos-David_Reboredo-Alfredo_Saenz-Mercedes_Mila_2_1841205065.html)

61 Interview with David Cabo, Civio.

---

Thus a database generated by civil society – in this case through scraping and aggregating information from public records – was successfully used as an advocacy tool to obtain official institutional recognition for concerns about the lack of transparency and accountability in official pardoning processes.

---



**UWEZO**

**ALTERNATIVE MEASUREMENTS TO EVALUATE  
LITERACY AND NUMERACY (EAST AFRICA)**

**JWEZO**



## BACKGROUND

In the past decade, governments in East Africa committed to the UN Educational, Scientific and Cultural Organization's (UNESCO's) Dakar Framework for Action in striving to provide Education For All.<sup>62</sup> In the wake of this initiative, East Africa's enrolment rates increased notably.<sup>63</sup> However, these growth rates have often not been matched by quality improvements of education. In some regions, numeracy and literacy have remained low, as a result of under-trained teachers, crowded classrooms, inadequate learning materials and other factors. In response to this situation, the civil society organisation Twaweza launched the Uwezo initiative in order to document levels of numeracy and literacy among 6- to 16-year-old children in Kenya, Tanzania and Uganda.

## DATA COLLECTION

The Uwezo project started in 2009 in Kenya in order to evaluate levels of literacy and numeracy over a five-year period. Initially, the project collaborated with textbook authors to develop new measurements. Yet the relevant educational institutions did not accept the methodological validity of this approach. Therefore, Uwezo partnered with the Ministry of Education in Uganda in order to obtain its formal support. According to Uwezo, this was an essential step to ensure the acknowledgement of local and national public institutions.<sup>64</sup>

To start with, a survey had to be designed that could shift the political focus from indicators such as classrooms and teachers towards effective learning outcomes. The survey evaluates foundational reading and numerical skills a school child has to be capable of at Grade 2.<sup>65</sup> In order to be officially accepted, Uwezo's survey had to be grounded in official curriculum criteria and statistical methods, established together with experts acknowledged by the public authorities. Uwezo engaged multiple official organisations in a tool development panel, which included the National Curriculum Development Centre, which delivers expertise about educational standards and curricula, as well as schoolbook authors.

62 UNESCO, *Education for All Global Monitoring Report*. Paris: UNESCO, 2013, <http://unesdoc.unesco.org/images/0012/001211/121147e.pdf>

63 Notably Ethiopia, Kenya and Tanzania have been successful in increasing the absolute enrolment rates of primary education. For further details, see UNESCO, *Education for All Global Monitoring Report*. Paris: UNESCO, 2013, <http://unesdoc.unesco.org/images/0021/002193/219351e.pdf>

64 Interview with Mary Goretti Nakabugo

65 See: <http://palnetwork.org/uwezo/>

Another partner of the panel, the Uganda Bureau of Statistics, advised Uwezo about sampling techniques. Based on official census data, Uwezo randomly selected 20 households per census district to ensure statistically representative sampling. The tool development panel guaranteed numeracy and literacy were measured in accordance with official educational standards and complied with methodological and statistical norms and expectations of relevant public bodies.<sup>66</sup>

While the survey design and household sampling had to be elaborated with official institutions, volunteers and civil society organisations in collaboration with Uwezo conducted the data gathering process, evaluation and editing of reports independently. In order to select “trustworthy” volunteers, Uwezo collaborates with high official staff members who recommend four organisations per district, from which Uwezo chooses one. Based on the recommendations of these organisations, Uwezo chooses two volunteers who have a good reputation within the community and who have the necessary education to conduct surveys. These volunteers are sent to 20 randomly sampled private households per census district. Uwezo presented its annual report to the Ministry of Education and findings were discussed before they were published. As one national coordinator for Uwezo argues, the aim was not to shame authorities but to highlight issues in a way that was supported by well-documented and officially recognised evidence.

## OUTCOMES

---

**Uwezo’s work has contributed to an institutional reappraisal about how literacy and numeracy is officially recognised and measured. Several national ministries of education now explicitly use, acknowledge and draw on Uwezo’s work. Uganda’s officials have shifted their focus from quantitative measures to learning outcomes, as per Uwezo’s agenda.**

---

Uwezo’s work has contributed to an institutional reappraisal about how literacy and numeracy is officially recognised and measured. Several national ministries of education now explicitly use, acknowledge and draw on Uwezo’s work. Uganda’s officials have shifted their focus from quantitative measures

<sup>66</sup> Interview with Mary Goretti Nakabugo

to learning outcomes, as per Uwezo's agenda. Several governments in East Africa have taken steps to support early learning that corresponds with another one of Uwezo's objectives. The Uwezo project exemplifies how civil society organisations can engage with public institutions in order to obtain support for citizen-generated data methods and protocols and to advance the state of evidence around issues they work on.

# WHO ACTUALLY HAS ACCESS TO WATER?

RECONSIDERING WATER SUPPLY MEASUREMENTS (MALAWI)



WHO ACTUALLY HAS ACCESS TO WATER?

## BACKGROUND

Water ministries in various East African countries, such as Ethiopia, Tanzania and Uganda, monitor their performance by collecting data about their financial resources and the provision of water over a given period of time.<sup>67</sup> They measure the supply of water in a so-called “performance-based monitoring”, often focusing on the amount of water supply points, such as wells or boreholes per region. However, the number of water points in an area does not automatically reveal how many people actually have access to them or whether there are regional inequalities in access to water.<sup>68</sup>

Being able to effectively evaluate whether and how water services are provided also depends on organisational, administrative, ownership and governance arrangements. For example, the parties responsible for installing and maintaining water points may not have access to timely information to monitor their functionality. While national government bodies and NGOs may establish and track water points, responsibility for their maintenance often resides with local districts; thus ongoing monitoring has to be conducted on a district-by-district basis. Furthermore, water sector performance data often remains unused – thereby missing an opportunity to inform policy-making on both national and district levels.

WaterAid is an international civil society organisation dedicated to improving access to safe water, hygiene and sanitation. As part of this work, WaterAid aims to improve data collection regarding the actual delivery of water services at the district level. Instead of merely capturing distribution of water points, WaterAid proposes more nuanced and context-specific measurements of the provision of water. It aims to support governments and citizens on national and district level to implement up-to-date reporting mechanisms on water supplies. Furthermore, it advocates that investments in water, sanitation and hygiene (WASH) infrastructures be informed by better evidence about who has access where in order to ensure equitable distribution of water supply services across regions. Three steps are crucial: data has to be (i) made available, (ii) effectively communicated and (iii) used by decision-makers on a district level. In order to achieve these three things, WaterAid carried out a rural “water point mapping” in Malawi in 2001, with follow-up projects in other countries such as Ethiopia, Tanzania and Uganda.

67 See K. Welle, *Strategic Review of WaterAid’s Water Point Mapping in East Africa. Based on a Review of Ethiopia, Tanzania, Kenya and Uganda*, London: WaterAid, 2010.

68 See K. Welle, *Strategic Review of WaterAid’s Water Point Mapping in East Africa. Based on a Review of Ethiopia, Tanzania, Kenya and Uganda*, London: WaterAid, 2010.

## DATA COLLECTION

---

**Whenever possible, WaterAid aims to involve representatives from all political levels (ministries, districts, village level) in the definition of data that should be captured, in the data collection process and in the discussion of outcomes.**

---

Water point mapping is a technique to monitor the spatial distribution and status of water supplies. WaterAid works to contextualise the spatial distribution of water facilities by overlaying data about water points with information about population and administrative boundaries.<sup>69</sup> The maps it produces in partnership with local governments or service providers carry a clear message on who is and who is not supplied with water. They also highlight accessibility (distance to water points), financing requirements, planning (priority areas for resource allocation) and water quality as well as sustainability of services – including cost recovery and availability of technical support.

WaterAid developed the Water Point Mapper as a user-friendly solution to map the supply of water at district level. Users collect water point data offline using a handheld GPS device. The data is exported into a spreadsheet and can be visualised using a simple mapping programme.

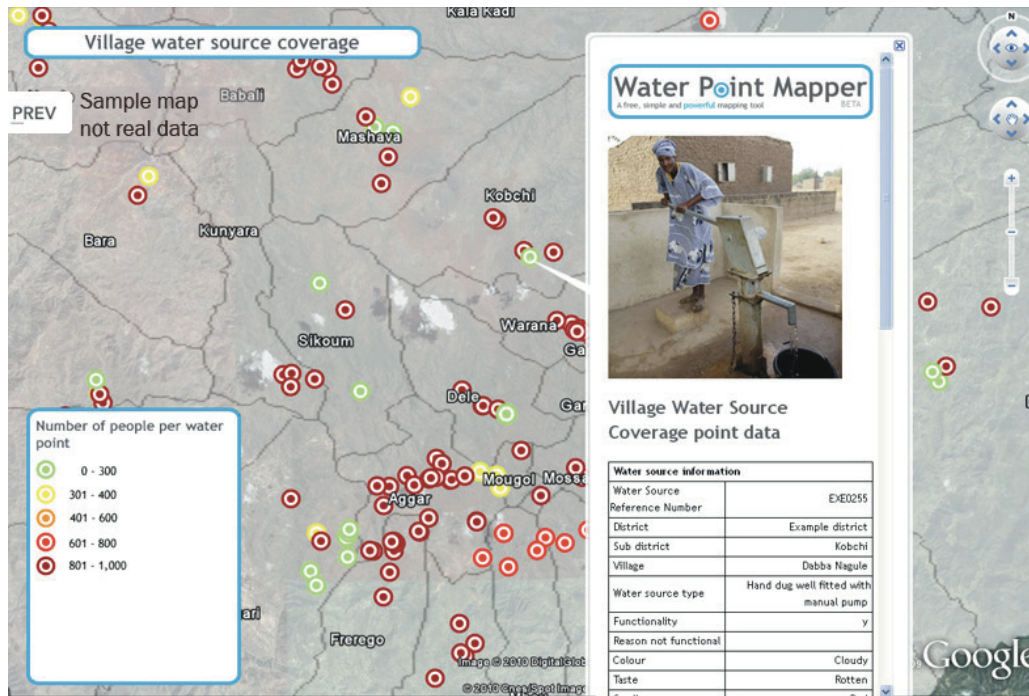
Whenever possible, WaterAid aims to involve representatives from all political levels (ministries, districts, village level) in the definition of data that should be captured, in the data collection process and in the discussion of outcomes. The latter step is important to validate data by comparing it with other existing data inventories. This gives governmental actors a sense of ownership of the process and responsibility for updating data, and facilitates the participation of local communities in the process of updating and validating data.

Ellen Greggio from WaterAid told us their goal was to increase acceptance of the data and to establish robust and sustainable mechanisms for it to be updated regularly (from both within and beyond the public sector) in order to enable responsive, evidence-based policy-making. WaterAid is working with local and national government bodies to test and implement data update mechanisms based on a combination of community crowd-sourcing and local governmental resources.

---

<sup>69</sup> See K. Welle, *Strategic Review of WaterAid's Water Point Mapping in East Africa. Based on a Review of Ethiopia, Tanzania, Kenya and Uganda*, London: WaterAid, 2010.

Image of water source coverage in different villages: [waterpointmapper.org](http://waterpointmapper.org)



For example, in Uganda, WaterAid collaborated with a consortium of other NGOs in order to pilot a system for crowdsourcing information on non-functional water points to trigger action from hand pump mechanics and water officers from local districts.<sup>70</sup>

## OUTCOMES

In Malawi, water point mapping has been successfully used as an instrument to advocate for improvements to the supply of water to communities that were previously excluded. Previously, water services were allocated to communities with strong political backing at the expense of other underserved communities, as there was no systematic body of evidence to support more equitable investment decisions. Water point mapping data has been used as a tool to help district government and other district partners plan new water point locations. These plans ensured villages with low water coverage figures were given priority. Water point mapping information helped improve the transparency and accountability of new investments – facilitating advocacy for fairer allocations and challenging pressure from better-resourced and better-connected groups to receive preferential treatment.<sup>71</sup>

<sup>70</sup> See K. Welle, Strategic Review of WaterAid's Water Point Mapping in East Africa. Based on a Review of Ethiopia, Tanzania, Kenya and Uganda, London: WaterAid, 2010.

<sup>71</sup> Interview with Ellen Greggio, WaterAid.

The data and maps that WaterAid championed were used to highlight gaps and inadequacies in official data collection practices around the provision of water at district level. This directly led to new forms of data collection, which were implemented in collaboration with public institutions, community groups and other actors. In particular, the work contributed to data collection practices that went beyond the quantitative measurement of the distribution of water points to include richer, more contextual forms of measurement that gave a clearer empirical picture of the actual supply of water. These enriched maps and datasets have been successfully used to support WaterAid's policy and advocacy activities, leading to increased government and donor funding for water and sanitation projects.<sup>72</sup>

 72 Interview with Ellen Greggio, WaterAid.



# DISCUSSION, ANALYSIS AND RECOMMENDATIONS



In this report, we have looked at how citizens and civil society groups can generate data as an advocacy tool to influence institutional data collection practices. In this final section, we discuss (i) the question of citizen-generated and civil society vs. institutional data; (ii) technologies, methods and strategies for changing what counts; and (iii) risks and limitations; before concluding with (iv) recommendations for civil society organisations, public institutions, policy-makers, funders and others.

## CIVIL SOCIETY VS. INSTITUTIONAL DATA?

---

**Citizen-generated data and civil society data can be used to articulate alternative conceptions of what matters and how things should be organised, optimised and resourced.**

---

Although often created in response to the perceived gaps or limitations of official information, data generated by citizens and civil society groups is often created without an explicit intention to try to influence institutional data collection practices. In some cases, the goals for which these citizen-generated and civil society data infrastructures have been established may be better served if they continue to operate independently from public institutions – whether because of concerns around privacy, surveillance, censorship, manipulation, corruption or repression or simply in order provide alternative perspectives and insights, be they competing or complementary. Sometimes, it may be desirable for civil society as opposed to the public sector to undertake data collection activities.

However, in other cases, securing changes in what and how public institutions count can be a powerful way for civil society groups to obtain official recognition and resources for their issues and concerns. In such cases, citizen-generated and civil society data can be a valuable tool to advocate for changes in what is counted. Citizen-generated and civil society data collection practices can be used to contest, challenge, augment and enrich ways of seeing and ways of knowing that are inscribed within public data infrastructures – including through official practices of counting, classifying, calculating, measuring, mapping, monitoring and evaluating.<sup>73</sup> Extra-institutional data can thus be used to open up space for democratic deliberation between public institutions and civil society actors around the scope, focus and priorities of public data systems – as well as how they might be adjusted, recalibrated and reoriented in accordance with different methods or matters of concern. Citizen-generated and civil society data can be used to articulate alternative conceptions of what matters and how things should be organised, optimised and resourced.

Of course, if changes in official data collection are secured, this does not necessarily imply citizen-generated and civil society data collection should discontinue. Sometimes, if changes are successfully institutionalised, this may obviate the need for data from civil society. In other cases, it may remain valuable to have an additional independent source of data, which might, for example, be combined with other sources of information, bring different kinds of insights or be used for the purposes of comparison with or verification of official data.

73 In this context, we understand data infrastructures as composites of technical, legal and social systems (e.g. software, laws, policies, practices, standards) involved in the creation and management of data. See J. Gray, "Democratising the Data Revolution: A Discussion Paper", Open Knowledge, 2015, <http://blog.okfn.org/2015/07/09/democratising-the-data-revolution/> and J. Gray and T. Davies, "Fighting Phantom Firms in the UK: From Opening Up Datasets to Reshaping Data Infrastructures?" Working Paper, Third International Open Government Data Conference, Ottawa, May 27, 2015, <http://ssrn.com/abstract=2610937>

## TECHNOLOGIES, METHODS AND STRATEGIES FOR CHANGING WHAT COUNTS

In the case studies above, we surveyed how civil society actors had mobilised a broad repertoire of different approaches for using data they had generated in order to change what public institutions count. This included drawing on a wide range of **technologies and methods** in order to generate this data, including:

### TECHNOLOGIES

**DEPLOYING MONITORING EQUIPMENT** – including custom devices (e.g. to map pollution);

**MAPPING WITH “DRONES” OR GPS DEVICES** (e.g. to scrutinise land boundaries);

**UNDERTAKING NEW SURVEYS** (e.g. to measure literacy);

**COMBINING MULTIPLE EXISTING DATABASES** (e.g. to count migrant deaths);

**SCRAPING AND AGGREGATING DATA** from official sources (e.g. to monitor official pardons);

**CROSS-REFERENCING OFFICIAL, NEWS AND SOCIAL MEDIA SOURCES** (e.g. to count police killings);

**CREATING CROWDSOURCING MECHANISM** in order to collect individual stories and reports from citizens and civil society groups (e.g. to collect reports of police killings).

These citizen-generated and civil society data collection practices have led to various forms of engagement with public institutions about changing official data collection. Civil society groups in our case studies were successful in eliciting several different kinds of **responses from public institutions**, including:

### RESPONSES

**INVESTMENT** in further data collection operations (e.g. with the Citizen Sense project);

**ADOPTION** of the proposed data collection practices (e.g. with The Counted);

**ENGAGEMENT** with citizen-generated and civil society data collection (e.g. with Uwezo or the Community Drones projects);

**OFFICIAL SUPPORT** for the proposed data collection practices (e.g. with WaterAid);

**ENDORSEMENT AND RECOGNITION** for citizen-generated and civil society data collections (e.g. with Civio’s database of pardons).

The projects featured in this report might serve to inform the development of **civil society strategies to influence public data collection**. For example:

## CIVIL SOCIETY STRATEGIES

**DATA CAN BE “JUST GOOD ENOUGH”.** As Jennifer Gabrys highlighted, data can be “just good enough” to strengthen the case for the official recognition of a problem, to provide evidence that further data collection is needed or to mobilise new forms of citizenship and civil society advocacy.

### **COMMUNICATING EARLY AND OFTEN AROUND DATA COLLECTION**

**METHODS CAN STRENGTHEN OFFICIAL SUPPORT.** Several projects found that open, participatory discussions around methodologies used to generate data played an important role in garnering official recognition and support. Our case studies on Uwezo and WaterAid demonstrate how politicians, local decision-makers, public bodies, community members and activists can cooperate around data collection methodologies that are accepted by all.

**FLAGGING LEGAL VIOLATIONS CAN ACCELERATE OFFICIAL RESPONSES.** In the case of the Community Drones project, geographical data provided evidence that companies were not complying with official regulations, which compelled public bodies to intervene.

### **LOCAL AND CONTEXTUAL KNOWLEDGE CAN AUGMENT AND IDENTIFY**

### **“GAPS” IN OFFICIAL DATA COLLECTION AS WELL AS BRINGING NEW**

**INSIGHTS AND PERSPECTIVES TO IMPORTANT ISSUES.** For example, working with local residents, the Citizen Sense project found it was able to deploy sensors and obtain knowledge of local contexts that regulators and public institutions did not possess.

## RISKS AND LIMITATIONS

Advocating for changes in official data collection may not be as straightforward as collecting data independently. It may come with a whole host of uncertainties and risks. Here, we briefly recount a few of the risks and limitations that came up in the course of our studies and interviews.

Some public institutions may have an incentive either not to collect data or not to invest in accurate, comprehensive or timely data collection. For example, in our case studies above, it was noted that institutions in the US systematically under-reported on police killings. European border authorities consider migration deaths beyond their remit of preventing illegal migration.

In cases where citizen-generated and civil society data collection processes have been established in order to contest the agendas of current governance structures, they may need to address the misalignments between their objectives and official policy before their efforts can be officially recognised. While the strategy of using data that is “just good enough” proved successful in at least one of our case studies, in other cases the methodological differences between civil society and public institutional data collection practices may hinder official acceptance.

In some regions and countries, undertaking independent data collection activities may be risky or even illegal. Citizens and activists may risk attracting unwanted attention from public authorities or even fines or imprisonment for their activities. Independent data collection activities may be more difficult in environments with weaker protections for human rights, freedom of expression and independent civil society, or in countries where corruption, clientelism and political persecution are rife. In such environments, digital data collection tools may leave traces that governments could use to identify, track or target individuals or groups associated with activities considered problematic.

Finally, different aspects of the projects examined above will be more or less replicable in different contexts. Contingent external factors at work in the case studies above – whether political, economic, cultural, social, legal or otherwise – should not be underestimated. In some cases, high-profile public controversies increased pressure on institutions to take action (e.g. El Indultómetro, The Counted). In other cases, citizen-generated and civil society data collection activities were strongly aligned with the prerogatives of international development programmes, which likely increased support from local, national and international institutions (e.g. Uwezo and WaterAid).

## RECOMMENDATIONS

On the basis of our case studies, interviews and consultations with our reference group (listed in the acknowledgements section), we propose the following recommendations.

We suggest **civil society actors** who are interested in influencing the data collection practices of public institutions:

### CIVIL SOCIETY

**COLLECT DATA ON ISSUES THEY CARE ABOUT** as a means to secure recognition and action around them. This could include sample data in order to ascertain data collection priorities.

**IDENTIFY AND BUILD ALLIANCES WITH ACTORS WITH A STAKE IN THEIR ISSUE**, including through coalitions of local residents, citizens and civil society groups. Engagement with these groups may include data literacy and educational activities in order to stimulate and support alternative data collection practices.

**ESTABLISH CONTACT WITH RELEVANT PUBLIC INSTITUTIONS WHERE APPROPRIATE**, in order to highlight gaps and limitations in official data as well as making the case for changes. This depends on the data and the institution in question and may not be a suitable move for all groups (e.g. where there are risks of flagging unwanted attention).

**DOCUMENT AND SHARE THEIR TECHNOLOGIES, METHODS AND ADVOCACY STRATEGIES WITH OTHER CIVIL SOCIETY GROUPS WHERE APPROPRIATE**, so others can draw on their experiences.

**TAKE STEPS TO REDACT SENSITIVE OR PERSONALLY IDENTIFYING INFORMATION IN DATA THAT THEY GENERATE**, in order to protect the privacy of individual citizens and civil society groups that contribute to data collection. This might include through designing data infrastructures with privacy in mind, using encryption tools and seeking advice from privacy and digital rights groups.

We suggest **public institutions, policy-makers and funders** interested in making public data infrastructures more responsive to the concerns of civil society actors:

## PUBLIC INSTITUTIONS & POLICY-MAKERS

**RECOGNISE THAT CITIZEN-GENERATED AND CIVIL SOCIETY DATA CAN PLAY A DIFFERENT AND COMPLEMENTARY ROLE TO PUBLIC SECTOR DATA.** They should look for ways to engage with, acknowledge and support these initiatives.<sup>74</sup>

**INVESTIGATE FUNDING AND SUSTAINABILITY MODELS FOR CITIZEN-GENERATED AND CIVIL SOCIETY DATA.** In many cases, citizen-generated and civil society data should be considered complementary to institutional data collection – rather than as a pretext to stop or reduce funding for the latter.

**SUPPORT CONSULTATION AND PARTICIPATION PROCESSES TO ENABLE CIVIL SOCIETY INPUT REGARDING INSTITUTIONAL DATA COLLECTION,** including through events, responsive communication channels and participatory design processes.

**SUPPORT FURTHER RESEARCH AND THE DEVELOPMENT OF RESOURCES IN THIS AREA** that can be used to make public data infrastructures more responsive to the interests and concerns of civil society.

<sup>74</sup> For example, the UN Environment Program (UNEP) has explicitly acknowledged that citizen science provides important perspectives on environmental issues and runs a data portal for citizen science projects at: <http://uneplive.unep.org/citizen>. For other ways public institutions can support citizen generated data, see C. Wilson and Z. Rahman, "Citizen-Generated Data and Governments. CIVICUS. Towards a Collaborative Model", 2015, <http://civicus.org/images/citizen-generated%20data%20and%20governments.pdf>

# REFERENCES AND FURTHER READING

- Bounegru, L. (2014). What Data Journalists Need to Do Differently. *Harvard Business Review*. [hbr.org](http://hbr.org)
- Burghart, B. (2015). First Encounter. [www.fatalencounters.org](http://fatalencounters.org)
- Bruno, I., Didier, E. and Vitale, T. (2014). Statactivism: Forms of Action between Disclosure and Affirmation. In *Partecipazione e conflitto. The Open Journal of Sociopolitical Studies*, Vol. 7, No. 2: 198-220. [ssrn.com](http://ssrn.com)
- Bruno, I., Didier, E. and Vitale, T. (Eds) (2014). Statistics and Activism. Special issue of *Partecipazione e conflitto. The Open Journal of Sociopolitical Studies*. <http://siba-ese.unisalento.it/index.php/paco/issue/view/1248>
- Citizen Sense (n.d.a.). Citizen Sense Monitoring Events in Pennsylvania. <http://www.citizensense.net/sensors/citizen-sense-monitoring-kit-pennsylvania/>
- Citizen Sense (n.d.b.). Data Analysis Toolkit. <http://www.citizensense.net/resources/data-visualization-tool/>
- Civio (2015). 87 Indultos en 2014, Récord a la Baja. <http://elindultometro.es/index.html>
- Del Grande, G. (2010). Death at the Border. Press Review 1988-2009. *Fortress Europe* blog, 14 January. <http://fortresseurope.blogspot.nl/2006/01/press-review.html>
- EIA (2014). *Marcellus Region Production Continues Growth. Today in Energy*, 5 August. [www.eia.gov](http://www.eia.gov)
- FBI (2013). Crime in the United States, 2012. [www.fbi.gov](http://www.fbi.gov)
- Gabrys, J. and Pritchard, H. (2015). Next-Generation Environmental Sensing: Moving Beyond Regulatory Benchmarks for Citizen-Gathered Data. In Berre, A. J., Schade, S. and Piera, J. (Eds) Proceedings of the Workshop "Environmental Infrastructures and Platforms 2015", Barcelona, 28-30 October 2015. <http://ecsa.citizen-science.net/sites/ecsa.citizen-science.net/files/ENVIP-2015-Draft-Binder.pdf>
- García, J. (2012). Indultados los cinco "mossos" condenados por torturar a un rumano. *El País*, 17 February. [ccaa.elpais.com](http://ccaa.elpais.com)
- Grasso, D. (2014). Gallardón miente: concedió ocho indultos en casos de corrupción. *El Confidencial*, 13 March. [www.elconfidencial.com](http://www.elconfidencial.com)
- Gray, J. (2015). Democratising the Data Revolution: A Discussion Paper. Open Knowledge. Available at: [blog.okfn.org](http://blog.okfn.org)
- Gray, J. and Davies, T. (2015). Fighting Phantom Firms in the UK: From Opening Up Datasets to Reshaping Data Infrastructures? Working Paper "Third International Open Government Data Conference", Ottawa, 27 May. [ssrn.com](http://ssrn.com)
- Hamilton, M. (2015). Crowdsourcing The Counted: How *The Guardian* Aims to Put the Audience at the Heart of Its Journalism. *NiemanLab*, 17 June. [www.niemanlab.org](http://www.niemanlab.org)
- IOM (2014). *Fatal Journeys. Tracking Lives Lost during Migration*. Geneva: IOM. [publications.iom.int](http://publications.iom.int)
- Kayser-Bril, N. (2014). The Migrants Files: A Quantitative Approach to Migration Policy. *Border Criminologies* blog, 5 April. [www.law.ox.ac.uk](http://www.law.ox.ac.uk)



- Kille, L.W. (2014). Fracking, Shale Gas and Health Effects. *Research Roundup*, 14 November. [journalistsresource.org](http://journalistsresource.org)
- Laughland, O., Swaine, J., McCarthy, C., and Lartey, J. (2015). Justice Department Trials System to Count Killings by US Law Enforcement. *The Guardian*, 5 October. [www.theguardian.com](http://www.theguardian.com)
- Mallet, V. (2011). Santander Chef Pardoned in 17-Year-Old Case. *The Financial Times*, 12 November. [www.ft.com](http://www.ft.com)
- Manach, J.-M. (2014). Ces gens-là sont morts, ce ne sont plus des migrants. *Monde Diplomatique*, 31 March. <http://www.monde-diplomatique.fr/carnet/2014-03-31-morts-aux-frontieres>
- McCarthy, T. (2015). Police Killed More than Twice as Many People as Reported by US Government'. *The Guardian*, 4 March. [www.theguardian.com](http://www.theguardian.com)
- Noticias Jurídicas (n.d.). Ley de 18 de junio de 1870, de Reglas para el ejercicio de la Gracia de indulto. [noticias.juridicas.com](http://noticias.juridicas.com)
- People's Action for Learning Network (2016). Uwezo. [palnetwork.org](http://palnetwork.org)
- Radjawali, I. and Pye, O. (2015). Counter-Mapping Land Grabs with Community Drones in Indonesia. Conference :Land Grabbing, Conflict and Agrarian-Environmental Transformations: Perspectives from East and Southeast Asia", Chiang Mai, 5-6 June.
- Rogers, R. (2013). *Digital Methods*. Cambridge, MA: MIT Press.
- Sabarini, P. (2013). NGO Maps out Indigenous Community Territories. *The Jakarta Post*, 23 June. Available at: [www.thejakartapost.com](http://www.thejakartapost.com)
- Seiffert, J. (2014) "Migrant Files:" The EU's Refugee Victims. *Deutsche Welle*, 15 April. [www.dw.com](http://www.dw.com)
- SETAPAK (2016). Indirect Drivers. Available at [programsetapak.org](http://programsetapak.org)
- Swaine, J., Laughland, O. and Lartey, J. (2015). We're *the Guardian* Reporters behind The Counted, a Project to Chronicle Every Person Killed by Police in the US. Reddit. [www.reddit.com](http://www.reddit.com)
- TEBTEBBA (2012) 'Indonesian Government Accepts Ancestral Domain Maps'. 14 November. Available at: [www.tebtebba.org](http://www.tebtebba.org)
- The Guardian* (2015). About the Project. What is The Counted? [www.theguardian.com](http://www.theguardian.com)
- The Washington Post* (2015). 980 People Shot Dead by Police This Year. [www.washingtonpost.com](http://www.washingtonpost.com)
- UN Data Revolution Group (2014). A World That Counts: Mobilising the Data Revolution for Sustainable Development. [www.undatarevolution.org](http://www.undatarevolution.org)
- UNESCO (UN Educational, Scientific and Cultural Organization) (2013). *Education for All Global Monitoring Report*. Paris: UNESCO. Available at: [unesdoc.unesco.org](http://unesdoc.unesco.org)
- UNITED for Intercultural Action (n.d.). The Fatal Policies of Fortress Europe. Available at: [www.unitedagainstracism.org](http://www.unitedagainstracism.org)
- US Department of Justice (2015a). Attorney General Holder Urges Improved Data Reporting on Both Shootings of Police Officers and Use of Force by the Police. *Justice News*, 15 January. [www.justice.gov](http://www.justice.gov)
- US Department of Justice (2015b). Attorney General Lynch: Use-of-Force Data is Vital for Transparency and Accountability. *Justice News*, 5 October. [www.justice.gov](http://www.justice.gov)
- Welle, K. (2010). Strategic Review of WaterAid's Water Point Mapping in East Africa. Based on a Review of Ethiopia, Tanzania, Kenya and Uganda. London: WaterAid. [www.wateraid.org](http://www.wateraid.org)
- Wilson, C. and Rahman, Z. (2015). Citizen-Generated Data and Governments. CIVICUS. Towards a Collaborative Model. [civicus.org](http://civicus.org)



Jonathan Gray, Danny Lämmerhirt, Liliana Bounegru, *Changing what counts: how can citizen-generated and civil society data be used as an advocacy tool to change official data collection?*

For more information, visit [www.thedatashift.org](http://www.thedatashift.org)  
or contact [datashift@civicus.org](mailto:datashift@civicus.org)  
First published, February 2016



This work is licensed under the Creative Commons Attribution-ShareAlike 3.0 License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/3.0/>

Printed on recycled paper/FSC.  
Graphic design by Federico Pinci



# CHA WIF CO

**DataShift** is a multi-stakeholder, demand-driven initiative that builds the capacity and confidence of civil society to produce and use citizen-generated data to monitor sustainable development progress, demand accountability and campaign for transformative change. Ultimately, our vision is a world where people-powered accountability drives progress on sustainable development. DataShift is an initiative of **CIVICUS**, in partnership with **the engine room** and **Wingu**. For more information, visit [www.thedatashift.org](http://www.thedatashift.org) or contact [datashift@civicus.org](mailto:datashift@civicus.org).

