

Deliverable 7.4

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Concerned work package leader: Marco Boscolo

Task leader: formicablu

Authors: Giulia Bonelli, Marco Boscolo, Elisabetta Tola

Contributors: all partners

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v1.1	15.05.2022	formicablu	Internal revision of the first draft
v1.2	31.05.2022	ENJOI consortium	Contribution to the case studies to analyze
v1.3	15.06.2022	formicablu	Internal revision of the second draft draft
v1.4	29.06.2022	ENJOI consortium	Final revision

OUALITY ASSURANCE

To ensure the quality and correctness of this deliverable, we arranged an internal review and validation process. The deliverable was drafted by the work package leader (Marco Boscolo, formicablu). All partners contributed and reviewed the overall draft. Before submission, the formicablu team made a final review and validation.

STATEMENT OF ORIGINALITY AND DISCLAIMER

This deliverable contains original, unpublished work except where clearly indicated otherwise. It builds upon the experience of the team and related work published on this topic. Acknowledgment of previously published material and others' work has been made through appropriate citation, quotation, or both.

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TABLE OF CONTENTS

1.	Summary	3
2.	Project overview	4
3.	Constructive and Solution Journalism	5
4.	Methodology and rationale	8
5.	Tracking the use of solution journalism on science topics:	
б.	Case studies	10
7.	Conclusions	33
8.	References	35

1. SUMMARY

ENJOI aims at contributing to improving the science communication and science journalism field by identifying ways that will improve their consistency, reliability, and trustworthiness. On a more general level, ENJOI project, and in particular its Observatory For Outstanding Open Science Communication¹ points to stimulate the development of critical thinking for citizens, especially in their role as audience for science communication and science journalism, but also for other involved actors, such as communicators and journalists themselves.

The Covid-19 pandemic that hit Europe and the whole world in the last years has proved a significant test bed for consistency, reliability, and trustworthiness. For their part, governments and institutions found themselves overwhelmed by the difficulties of communicating the emergence of a new pathogen with completely new characteristics to a society that - at first - was worried and scared. Journalists were overwhelmed in a similar manner, but through their public role often inadvertently contributed to confusion and alarmism.

There is a long tradition of journalism as a means to sound an alarm, and without any doubt, this is part of the mission of journalism itself when it operates in the public interest. But in recent years, more and more journalists around the world have started to couple this long-standing way of doing things with a new approach called constructive or solution journalism (for a detailed description of the practice, see Section 3 of this document). The basic idea is that journalists, when possible, should look for stories where they identify a problem (social, economical, environmental, etc.) and also provide at least a temptative solution.

This kind of reporting has become more and more popular when dealing with topics linked to climate change. In the last few years, we as readers have been inundated with stories about the harsh and terrifying consequences of a climate that's becoming hotter and hotter. That deluge could result in paralysis and in a society that gives less and less attention to the alarm. In this sense, constructive or solution journalism acts as a display of concrete possibilities: its stories are not focused on vague future solutions, but on concrete and active possibilities that are already working. This led to a new form of journalism, where innovation lies not on technological advancement but on the original approach and a few directives that can really connect journalism with empowerment and capacity building.

¹ https://enjoiscicomm.eu/observatory/

2. PROJECT OVERVIEW

ENJOI (ENgagement and JOurnalism Innovation for Outstanding Open Science Communication) is exploring and testing **engagement** as a key asset of innovation in science communication distributed via media platforms, with a strong focus on journalism.

Through a combination of methodologies and in collaboration with producers, target users and stakeholders of science communication, ENJOI is co-creating and selecting a set of **standards**, **principles** and **indicators** (SPIs) condensed to a **Manifesto for an Outstanding Open Science Communication (OOSC)**.

A first selection of the SPIs has been made public on the <u>ENJOI website</u>. This initial list was produced after a thorough review of existing academic literature, including books, gray literature, and a number of interviews with experts in different communication fields. The inception report on SPIs is the main content of D2.1. ENJOI is then deploying a series of actions via **Engagement Workshops**, **Labs**, **field** and **participatory research**, **evaluation** and **testing** phases to co-design the final list of SPIs and condense them in a Manifesto.

ENJOI is building the **OOSC Observatory**, its landmark product to make all results and outputs available to foster capacity building and collaboration of all actors in the field. The project is based in four countries: Belgium, Italy, Portugal and Spain, taking into account different cultural contexts, with a strong focus on the Mediterranean region and its features, challenges and specificities when it comes to science communication and journalism.

ENJOI's ultimate goal is to **improve science communication** by making it more consistently reliable, truthful, open and engaging. Contextually, ENJOI will contribute to the **active development of critical thinking**, **digital awareness and media literacy** of all actors involved in the process.

3. CONSTRUCTIVE AND SOLUTION JOURNALISM

Solutions journalism investigates and explains, in a critical and clear-eyed way, how people try to solve widely shared problems. While journalists usually define news as "what's gone wrong," solutions journalism tries to expand that definition: responses to problems are also newsworthy. By adding rigorous coverage of solutions, journalists can tell the whole story.

Mikhael Simmonds, The whole story

Constructive and solution journalism are often used as synonymous - and today, from a practical perspective, they are. Both approaches revolve around the overall idea of focusing on answers rather than questions only.

However, it might be useful to highlight some differences between the specific roots driving both solution and constructive journalism. A few years ago, constructive and solution journalism were relatively new formats, but today there is an increasingly high number of solution and constructive journalism networks around the globe. At the same time, while these terms are slowly getting more well-known amongst professionals, the concepts of solution and constructive journalism are still not very widespread.

Constructive journalism might be considered a broader method: it focuses on the process of constructively reporting, which means providing audiences with a fair, accurate and contextualized picture of the world, without overemphasizing the negative aspects (Constructive Institute). Constructive journalism advocates for a new mindset amongst journalists and editors, to promote a reflection on the media's impact on democracy. Within this context, constructive journalism can help promote a democratic conversation, engaging the local community.

Solution journalism takes a step further in a practical direction: part of constructive journalism, it can be considered rigorous, evidence-based reporting on the practical responses to shared social problems. It starts by looking for the root causes of a societal problem and then presents evidence of the impact of a specific solution to that problem. Solution journalism should also try and explain why that specific solution is working, and how it can be implemented in similar situations. Naturally, it's not a mere invitation to replicate a model or a certain solution, but to embrace an active proposition to look for solutions and to choose the ones that are more appropriate and sustainable and adapt for a specific environment and group of



people. Within this context, solution journalism should be seen as a "catalyst for change" (*Solution Journalism Network*).

Given this premise, from now on we will consider **the two approaches interchangeable**. When it comes to case study analysis, the intersections between constructive and solution journalism are so many that any attempts to categorize them would be surreptitious. For this reason, we will mainly focus on one of the many aspects of constructive and solution journalism: **serving community needs**. This has a lot in common with the engaged journalism approach - for a detailed analysis of engaged (science) journalism, see <u>Deliverable 7.1 Digital Engagement Focus Report</u>.

Both constructive and solution journalism do not imply that journalists should simply report good news. The main idea is to highlight how a certain problem has been addressed by a community at a local or higher level. The evidence and methodologies also provide inspiring actions and not only emotions. The overall objective is that of **empowering citizens and communities** to take action to solve their local issues also through the information and the insights they can gain through the media.

An effect that may be considered secondary in the constructive or solution approach is **transparency**: of the method utilized for reporting, of the sources of the stories and of the critical aspects of the solutions themselves. In the context of the ENJOI project that aims at analyzing and better understanding the characteristics that make the journalistic work of higher quality we think this secondary aspect could be of a certain relevance.

Even though constructive and solution journalism are not mainstream, in recent years they started to be recognized and gain traction also in the context of **environmental and climate crisis reporting**. This led, in some cases, to a sort of little trend: when journalists are covering climate change and its consequences they are also asked by the media they work for to provide "solution stories", as the readership may be tired of bad news on climate change. It is an approach that could lead to a certain degree of media detachment from reality, some critics says², as the need of keeping the alarm on the climate crisis risks colliding with a solutions-only approach.

Having that in mind, this deliverable is aimed at tracking the use of solutions and

https://twitter.com/LouDelBello/status/1531950877065756673?s=20&t=l8nJa0SmWneRVHTa2 -VsA



² For example, see:

constructive journalism on science topics. Solution journalism offers an innovative approach to the use of data and scientific storytelling: we will analyze and showcase examples of stories produced with a constructive angle in the field of science, with a special focus on Covid-19, Climate crisis, Water and food shortage, Pollution, and Artificial Intelligence.

4. METHODOLOGY AND RATIONALE

The ENJOI project bases its activities on a **participatory methodology**, involving a variety of science information producers, users and stakeholders to assess high quality in science communication and journalism.

All the partners are setting up a **multi-step iterative approach** to research, co-create and produce Standards, Principles and Indicators (SPIs) together with recommendations and guidelines that will be condensed into the **ENJOI Manifesto**.

As a first step, this participatory and iterative approach was implemented within the ENJOI consortium itself to perform the first research task and deliverable 7.1 on engagement in journalism, 7.2 on data journalism and 7.3 on innovative digital formats in journalism.

A similar approach has been used in assessing this report. The focus is less on technological innovation in digital formats and the use of digital assets and more on a **new innovative approach to the stories** that are reported.

For the selection of outstanding examples of constructive or solution journalism, the team analyzed the main networks that arose in the field in the last years. These comprise The Solution Journalism Network³, The Constructive Journalism Project⁴, The Constructive Institute - Journalism of Tomorrow⁵, The Solutions Journalism Africa Initiative⁶, Health Solution Journalism in Africa⁷, as well as the prominent awards and grants in the field, such as the Beca de Periodismo de Soluciones of the Fundación Gabo in Spain and Latina America, The Pulitzer Center in the United States⁸, the Solutions Journalism Network's LEDE Fellows. The aim has been to represent a varied and as global as possible selection of stories that also reflect the different approaches in different cultural environments. Apart from the WP7 teamwork, a crucial contribution came from all partners from the ENJOI network, facilitating the introduction of valuable examples, especially with regard to the Southern Europe countries and Latin America.

The result is a list of 20 examples of constructive and solution journalism coming from 14 countries and covering relevant scientific topics in different fields: Covid-19, climate crisis, water and food shortage, pollution, and artificial intelligence. All

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³ https://www.solutionsjournalism.org/

⁴ https://www.constructivejournalism.org/

⁵ https://constructiveinstitute.org/

⁶ https://thewholestory.solutionsiournalism.org/the-solutions-iournalism-africa-initiative-9c3efd9acc14

⁷ https://healthsojo-africa.org/

⁸ https://pulitzercenter.org/

ENJOI - ENgagement and JOurnalism Innovation for Outstanding Open Science Communication
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www.enjoiscicomm.eu

these examples have been analyzed primarily focusing on the following aspects connected to solution or constructive journalism:

- Reporting on specific solutions to a problem or situation (one of the pillars of this kind of journalism);
- The specificity of the solution at a local level;
- The involvement of a local community.

These elements could all or some be present in each of the stories analyzed. The report also highlights the connection of these examples with other topics that have been the focus of ENJOI's previous reports, such as the use of data, the use of scientific literature as a source of information, and the possible use of innovative digital formats. Nonetheless, examples that are outstanding from the solution/constructive point of view have been included even if they fall into a more "traditional" approach to journalism.

As for all the previous reports from WP7, also the results of this work, combined with the other WP7 focus reports, will factually contribute to the scope of the **ENJOI Observatory**.

The main outcomes of this report will feed an **interactive graphic tool** collecting the problems addressed, the methods used, and the solutions suggested. The tool will be available on the <u>ENJOI website</u>.

5. TRACKING THE USE OF SOLUTION JOURNALISM ON SCIENCE TOPICS: CASE STUDIES ANALYSIS

Table 1: List of selected solution journalism stories

	Title	Media	Country	Topic	Info
1	How active community case search transformed testing in Kano State	Nigeria Health Watch	Nigeria	Covid-19	Article part of the Solution Journalism Africa Initiative project. Available in: Storytracker
2	Climate Solutions 101	Drawdown	USA	Climate crisis	Video series part of the "Climate Solutions" section of Solutions Journalism
3	Six-Legged Allies: How insects are shaping food futures	Unbias the News	Latin America	Water and food shortage	Project by Hostwriter - feminist cross-border newsroom working towards a more equitable and inclusive world of journalism
4	Kenya embraces green building technology	Diraj	Kenya	Pollution	Article part of the Solution Journalism Africa Initiative project. Available in: Storytracker
5	Abuelos que ya no estan solos	Historias que laten	Venezuela	Covid-19	Article is part of the series of publications resulting from the Solutions Journalism Grant from the Gabo Foundation and the Solutions Journalism Network.
6	La historia de las campesinas nicaragüenses en Costa Rica: Un campamento en el exilio	Confidencial	Costa Rica	Water and food shortage (+ migration)	Video reportage on Nicaraguans in exile and the construction of a peasant camp as an alternative to guarantee food and citizen security. The author herself was a refugee. This work was awarded the prize Beca de Periodismo de Soluciones - Edición Centroamérica.
7	In Czech Republic, cryptocurrency mining boosts agriculture	The InkLine	Czech Republic	Crypto, Al	This story is supported by the Solutions Journalism Network LEDE Fellowship.
8	Greens grown in urban kitchen gardens beat the	Mongabay	India	Covid-19, nutrition	Relation between pandemic effects and the food problem in



	lockdown blues				some parts of India, as well as lockdown blues. Published by Mongabay-India, a nonprofit environment and conservation news platform
9	Mapping Makoko	Pulitzer Center	Nigeria, Internatio nal	Artificial Intelligence, Environment, social empowerment	Digital community mapping. Project funded by the <u>Pulitzer</u> <u>Center</u> .
10	<u>Leprosing of the land</u>	Texty	Ukraine	Artificial Intelligence, Environment	Technical model of how to use imaging and AI to map illegal amber mining
11	Talking Sense	Guardian	UK	Artificial Intelligence, machine learning	Machine learning to better understand quotes and improve journalism. Not solution journalism in the traditional sense, but useful as a possible way to address the problem of unbalance in journalistic quotes. Also interesting for the ENJOI research work in other WPs.
12	Favela vs Covid-19	Outride	Brazil	Covid-19	This is the story of the grassroots initiatives that were launched by the residents of three favelas in São Paulo to face the problems caused or exacerbated by the pandemic.
13	Satélites, mapas e trajeto do boi: saída para reduzir desmatamento já opera no Brasil ("Satellites, maps and the cattle's path: solutions to reduce deforestation are already happening in Brazil")	(o)eco	Brazil	Food storage, environment al conservation	This story is published by the environmental journalism website (o)eco, which is also a non-profit association. It is considered one of the largest environmental vehicles in Brazil
14	Como os indígenas no Brasil têm se	Mongabay	Brazil	Climte crisis	Wildfires prevention (monitoring through apps by



	organizado para monitorar o aumento de incêndios em seus territórios ("How indigenous people in Brazil have organized themselves to monitor the increase of fires in their territories")				indigenous people)
15	Las claves del éxito de Nueva Zelanda en la lucha contra la Covid-19 "New Zealand's key of success in the fight against Covid-19"	La Vanguardia	Spain, New Zealand	Covid-19	The article explains how with 5 million inhabitants and only 21 deaths and no new cases (on May 28, 2020) New Zealand acted quickly, effectively, with unity and empathy, closed borders, communicated very well and prioritized health.
16	In face of rising sea levels the Netherlands 'must consider controlled withdrawal'	Vrij Nederland	The Netherla nds	Climate crisis	Solution journalism approach to sea level rise in The Netherlands
17	De grote klimaatgids: dit kan jij zélf doen tegen klimaatverandering ("The big climate guide: you can do this yourself against climate change")	De Correspond ent	The Netherla nds	Climate crisis	Practical everyday solutions to address the climate crisis, with the easy-to-do style
18	sensors.AFRICA AIR	Sensors Africa (platform)	Africa	Pollution	Pan-African citizen science initiative addressing the problem of lack of data on air pollution. Peculiarity: local hackers involved. The initiative was seed-funded by innovateAFRICA and is being incubated by Code for Africa.
19	Liberian women leading the way in tackling plastic pollution	AWIM - African Women in the Media	Liberia	Pollution	Article published in African Women in Media, which started as a Facebook group in August 2016 with the aim to positively impact the way



					media functions in relation to African women. Available in: Storytracker
20	How Sweden Sends Just 1% of Its Trash to Landfills	Reasons to be Cheerful	Sweden	Pollution, energy	Article published in Reasons to be Cheerful, a non-profit editorial project founded by artist and musician David Byrne

4.1 How active community case search transformed testing in Kano State

Authors: Adam Alqali **Keywords:** Covid-19

Media Outlet: Nigeria Health Watch Country and language: Nigeria, English Date of publication: 22 September 2020

Link: https://nigeriahealthwatch.com/how-active-community-case-search-transforme

d-testing-in-kano-state/

Problem

Covid-19 outbreak in Kano State, Nigeria, in March-April 2020

Solution

Innovative community testing strategy introduced by the government of Kano State: mass voluntary community testing

Solution method involved

Community engagement

Description

In March and April 2020, the Kano state in Nigeria recorded mysterious and unexplained deaths; initially, the state government blamed the spike in mortality rates on complications such as malaria, hypertension, and pneumonia. Conversely, after the conclusion of its fact-finding mission on the strange deaths in Kano in May, a presidential mission sent to the state said that after verbal autopsies, a large share of the deaths could be attributed to Covid-19.

The article, which is part of the <u>Solution Journalism Africa Initiative project</u>, uses the solution journalism approach to report on the innovative community testing strategy



introduced by the government of Kano State, which led to the rapid isolation of the virus in a short period of time. According to data from the Kano State Covid-19 taskforce, a total of 4,000 samples were taken across all the ten wards of Gwarzo Local Government Area in a period of eight days.

The solution method involved revolved around community engagement: as reported by the article, the transformation of the coronavirus testing landscape in Kano State resulted from collaborative efforts between the institutions and the local population. As a result, Kano State's daily Covid-19 testing numbers resulted to be the highest in Nigeria. This outcome was particularly important due to the strategic position of Kano State: it is not only the most populous northern state of the country but also the commercial nerve center of northern Nigeria. The saying goes that "when Kano State sneezes, other northern states catch a cold". And this was particularly relevant during the pandemic.

4.2 Climate Solution 101

Authors: Project Drawdown staff

Keywords: climate change

Media Outlet: Project Drawdown Country and language: USA, English

Date of publication: 2021

Link: https://drawdown.org/climate-solutions-101

Problem

Lack of educational sources on climate change based on solutions

Solution

A free 6-unit video series on climate change realized with the solution journalism approach

Solution method involved

E-learning free course

Description

Climate Solutions 101 is a free online course based on an innovative educational effort focused solely on solutions. Rather than rehashing well-known climate challenges, Project Drawdown centers game-changing climate action based on its own rigorous scientific research and analysis.



The e-learning free course consists of 6 units of about 15 minutes each: "Setting the scene", "Reducing climate change", "Reducing sources", "Supporting sinks and improving society", "Putting it all together", "Making it happen". A team of 11 experts were interviewed by the Project Drawdown staff.

This course combines Project Drawdown's trusted resources with the expertise of several inspiring voices from around the world.

4.3 Six-Legged Allies: How insects are shaping food futures

Authors: Melissa Castaño, Michelle Morelos, Mayra Prado Torres and Daniela Mejía

Castaño, Neha Vaddadi, Purple Romero, Gabriela Ramirez

Keywords: food, climate change **Media Outlet:** Unbias The News

Country and language: International, English

Date of publication: 2021

Link:

https://unbiasthenews.org/six-legged-allies-insects-shaping-food-futures-latin-america/

Problem

How to feed a booming global population in Latin America

Solution

Incorporating more insects into the human diet in Latin America

Solution method involved

Cross-border solution journalism, visual narrative

Description

This cross-border work focuses on the possible solutions to food shortage that propose the incorporation of insects into the human diet in Latin America. The cross-border story focuses on Argentina, Ecuador, Colombia and Mexico. The source combines Interviews and data from <u>Our World in data</u>. Besides the data and local stories, some recipes are also described.

The visual narrative and storytelling, as well as the images, are highly curated.

The article is published in <u>Unbias the News</u>, a feminist cross-border newsroom by Hostwriter, working towards a more equitable and inclusive world of journalism.

4.4 Kenya Embraces Green Building Technology



Authors: Duncan Lukoye, David Owino, Juma Majanga

Keywords: sustainable building, pollution

Media Outlet: DIRAJ (Disaster Risk Reduction Association of Journalists)

Country and language: Kenya, English Date of publication: 28 April 2022

Link: https://diraj.org/stories/green-building/

Problem

Pollution in the major cities of Kenya

Solution

Green building technology projects in Kenya

Solution method involved

Video reportage

Description

This video reportage focuses on green building technology, which has quickly become one of the most popular construction trends. The advantages of incorporating green technology into buildings are numerous and extensive, providing major advantages in both new and existing structures.

Even while corporations are hesitant to see the benefits, some environmental and architectural organizations are working hard to promote green design in Kenya and position their country as an outstanding leader in sustainable construction and energy-efficient design.

The authors examine how Kenya is slowly joining the club of countries that use green or ecologically friendly architecture in real estate development as the movement gains traction in Africa.

This work was published in DIRAJ, an association of journalists and communicators working in the fields of disaster risk reduction and humanitarian response in Africa and around the world. It was also part of the Solution Journalism Africa Initiative project and <u>Storytracker</u> project.

4.5 Abuelos que ya no están solos

Authors: Liza López, Ysabel Viloria, Arantxa López, Anaís Marichal, Carla Contreras, Jonathan Gutiérrez, Carlos Bello, Anaís Marichal



Keywords: Covid-19, migration **Media Outlet:** Historias que laten

Country and language: Venezuela, Spanish

Date of publication: 2020

Link: https://www.historiasguelaten.com/abuelos-gue-ya-no-estan-solos/

Problem

Elderly isolation in Caracas during Covid-19

Solution

A network of volunteers to help elderly in their everyday needs

Solution method involved

Community engagement, network building

Description

In Caracas, many old people are alone because their relatives migrated to other countries. This turned out to be a massive problem during Covid-19 lockdowns and isolations. A network composed of a dozen volunteers decided to take action, bringing elderly food and medical assistance. In a short period of time, they created a method to protect the most vulnerable population and prevent them from being exposed to long-term physical and psychological effects of Covid-19. The article reports on how this voluntary network managed to minimize the risks to the elderly during the pandemic. The main sources used are interviews with the involved people.

4.6 La historia de las campesinas nicaragüenses en Costa Rica: Un campamento en el exilio

Authors: Ximena Castilblanco

Keywords: emigration, refugee social issues, water and food shortage

Media Outlet: Confidencial

Country and language: Nicaragua and Costa Rica, Spanish

Date of publication: August 2021

Link: https://www.youtube.com/watch?v=q6prtSc_opg&ab_channel=Confidencial

Problem

Persecuted members of the Peasant Movement for Nicaragua forced to become refugees in Costa Rica



Solution

Construction of a peasant camp in exile in Costa Rica

Solution method involved

Video reportage

The socio-political crisis that emerged in 2018 in Nicaragua has forced more than 100,000 people to forcibly move to seek refuge in Costa Rica, including hundreds of members of the Peasant Movement for Nicaragua, one of the most important social movements and referents of resistance in the country, who have been besieged, persecuted, kidnapped, imprisoned and killed by the Ortega regime.

This is the story of the construction of a peasant camp in exile located in a rural and border community in Upala, Costa Rica, as an alternative to guarantee food and citizen security in a situation of vulnerability, insecurity and precariousness caused by forced displacement, through the voices of four Nicaraguan peasant women leaders who work the land.

The video reportage was produced by Ximena Castilblanco, who was herself a refugee. It was funded by the Solutions Journalism Fellowship Program for Honduras, Guatemala, El Salvador and Nicaragua of the <u>Gabo Foundation</u> with the support of the <u>Open Society Foundation</u>. This work was awarded the prize B<u>eca de Periodismo de Soluciones - Edición Centroamérica</u>.

4.7 In Czech Republic, cryptocurrency mining boosts agriculture

Authors: Inbar Preiss

Keywords: food, crypto, Al

Media Outlet: Inkline

Country and language: Czech Republic, English

Date of publication: 2020

Link: https://the-inkline.com/2020/04/05/in-czech-republic-cryptocurrency-mining-bo

osts-agriculture/

Problem

Unsustainable agricultural practices spread in Czech Republic

Solution

Cryptocurrency mining to boost agriculture in Prague



Solution method involved

Sustainable technology, circular economy

Description

The article reports on the experience of Bistro Cafe, in the Letná district in Prague, Czech Republic. Here, the pipes form the structure of the cafe's hydroponics, a method of growing crops using nutrient-enriched water instead of soil. This represents an initiative that weaves together the optimisation of the cryptocurrency mining process and open-source technology. The hydroponic structure in the cafe is one of the creations of Parallel Garden, a Czech-based initiative whose goal is to focus on the scalability of solutions towards sustainable agriculture. By using an interconnected device network, or IoT (Internet-of-Things), the inputs required for the crops, like light and water, are measured and deployed with high accuracy so that waste is mitigated.

These projects by Parallel Garden — founded by a blockchain-solutions lawyer, an entrepreneur and cryptocurrency miner, and an agricultural technologies specialist—aim to take practical actions to respond to the issues on natural resources and the environment. However, the article reports, there is still one missing key element: scalability. On a bigger scale, this project could have a much higher impact on food production and its move to reduce waste. For this reason, the article also aims at inspiring other realities to explore cryptocurrency mining to boost a more sustainable agriculture.

4.8 Greens grown in urban kitchen gardens beat the lockdown blues

Authors: Mayank Aggarwal

Keywords: Covid-19, psychological health, nutrition

Media Outlet: Mongabay

Country and language: USA and India, English

Date of publication: 17 April 2020

Link:

https://india.mongabay.com/2020/04/greens-grown-in-urban-kitchen-gardens-beat-t

he-lockdown-blues/

Problem

Covid-19- lockdown anxiety and depression in Mongabay, India



Solution

Urban kitchen gardens to beat the "lockdown blues"

Solution method involved

Community engagement, community building

Description

The article reports on a simple, and yet effective solution adopted by some neighborhood of Mongabay, India, to beat the "lockdown blues" during the pandemic: kitchen gardens. While the availability of a regular supply of vegetables was a concern for some people during the lockdowns in Indian cities, those who have been maintaining kitchen gardens for a while experienced a sense of relief with the availability of some vegetables in their backyard.

According to this article, the interest in kitchen gardens has spiked among urban residents during the lockdown and those who have been gardening for a while are sharing best practices in informal networks and through formal platforms.

The lockdown period has also got people interested in composting and organizations working in this area are promoting composting of kitchen waste.

The article revolves around the power of community engagement and community building during difficult times, and uses a solution journalism approach to inspire people and promote a sense of belonging around a possible common interest.

4.9 Mapping Makoko

Authors: Jacopo Ottaviani, John Eromosele, Oluwatosin Adeshokan

Keywords: Environment, health, social empowerment

Media Outlet: Pulitzer Center, The Guardian, CNN, Devex, Mail&Guardian

Country and language: International, English

Date of publication: January 2020

Link:https://pulitzercenter.org/node/5077

Problem

Absence of Makoko, one of Africa's inner-city slums, in any digital map

Solution

Digital community mapping project ok Makoko



Solution method involved

Artificial Intelligence, community engagement

Description

Makoko is one of Africa's most unique inner-city slums, with a third of the community built on stilts in a lagoon off the Lagos mainland. Makoko is estimated to be home to 300,000 people, but both government and residents claim the figure is higher. The numbers are hazy because the area appears as a near-blank space on maps—with little information about structures, density, or streets. This means it is almost impossible to properly track land ownership, plan infrastructure, optimize services, plan for emergencies, or support development. Being a blank spot on the map means authorities never adequately allocate resources to Makoko, or—worse—exploit the lack of awareness to grab the land and displace dwellers.

This project, funded by the Pulitzer Center, explores a bottom-up mapping approach that helped the community fight for their land rights. The project combines artificial intelligence, data, satellite images, on-the-ground multimedia journalism, and long-form storytelling. Articles about this project appeared in several media, such as *The Guardian, Cnn*, and *Devex*.

4.10 Leprosy of the Land

Authors: Vlad Herasymenko, Nadia Kelm, Anatoliy Bondarenko, Yevheniia Drozdova,

Yaroslava Tymoshchuk, **Keywords:** Environment, Al **Media Outlet:** Texty.org.ua

Country and language: Ukraine, English and Ukrainian

Date of publication: 2018

Link: https://texty.org.ua/d/2018/amber_eng/

Problem

Illegal amber mining in Ukraine

Solution

Technical model of how to use imaging and AI to map illegal amber mining in Ukraine

Solution method involved

Artificial Intelligence, satellite images



Description

Ukraine has a world amber market share of 30-40%. Illegal extraction of gemstones provides "jobs" to thousands of people who live near such deposits in Volyn, Zhytomyr, and most of all, in the Rivne region of a country. This project provides a technical model of how to use imaging and Al to map illegal amber mining in Ukraine.

To find the places mutilated by illegal mining, the authors developed and deployed a machine learning algorithm. It screens through several hundreds of thousands of satellite images to detect key amber mining sites in three Polissya regions with a total area of 70 thousands square kilometers. Users can see the detailed maps of illegal amber mining in Ukraine, as well as download data. All the pictures of this article are the satellite images of amber mining sites - clicking on each image, users can see the area on the map. The methodology used is open source, and available here.

4.11 Talking sense: using machine learning to understand quotes

Authors: Alice Morris, Michel Schammel, Anna Vissens **Keywords:** Artificial Intelligence, machine learning

Media Outlet: The Guardian

Country and language: UK, English

Date of publication: 25 November 2021

Link: https://www.theguardian.com/info/2021/nov/25/talking-sense-using-machine-l

earning-to-understand-quotes

Problem

Lack of balance (gender, age, nationality, expertise, etc.) in the journalistic quotes

Solution

Machine learning to better understand guotes and improve journalism

Solution method involved

Modular journalism and Al

Description

In 2021, The Guardian has been part of <u>JournalismAl Collab Challenges</u>, a project connecting global newsrooms to understand how artificial intelligence can improve



journalism. Their particular challenge was to answer this question: "How might we use modular journalism and AI to assemble new storytelling formats and reach underserved audiences?"

This article is a description of the whole process of using AI and machine learning to better understand quotes and improve journalism. The Guardian joined forces with Agence France-Presse (AFP) to work on a machine learning solution to accurately extract quotes from news articles and match them with the right source. They used two main tools: Spacy, one of the leading open-source libraries for advanced natural language processing using deep neural networks, and Prodigy, an annotation tool that provides an easy-to-use web interface for quick and efficient labelling of training data. The team manually annotated more than 800 news articles with three entities: content (the quote, in quotation marks), source (the speaker, which might be a person, an organization, etc), and cue (usually a verb phrase, indicating the act of speech or expression). The results looked promising, especially for the content entity. The model managed to identify all three entities (content, source, cue) in 89% of cases.

The next step will be building a user-facing tool to analyze, store and find quotes. This article is not solution journalism in the traditional sense, but in the long run, is an interesting attempt to address the problem of unbalance in the journalistic quotes.

4.12 Favela vs Covid-19

Authors: Priscila Pacheco, Lola Garcia-Ajofrin, Mawgorzata Mrozek, Marcin Suder,

Piotr Kliks, Alexandre De Maio, Cecilia Marins, Maskra, Alessandra De Maio

Keywords: Covid-19 **Media Outlet:** Outriders

Country and language: Poland, English, Polish, Portuguese, Spanish

Date of publication:

Link: https://outride.rs/pt/favela-vs-covid-19/paraisopolis

Problem

Covid-19 outbreak Brasil affecting the poorest communities in favelas

Solution

Local initiatives launched by the residents of three favelas in São Paulo to fight against Covid-19 social consequences



Solution method involved

Comics storytelling, community engagement, community building

Description

"The Covid-19 arrived in Brazil through the upper class but has spread like wildfire throughout the poorest communities." Starting from this statement, the project Favela vs Covid-19 tells the story of the grassroots initiatives that were launched by the residents of three favelas in São Paulo to face the problems caused or exacerbated by the pandemic. It uses the technique of comics storytelling, literally showing the three solutions adopted, which are divided into three chapters:

<u>Paraisópolis and Its "Street presidents"</u>; <u>Cars with Megaphones and a Radio Show in Heliópolis</u>; <u>Music Against Covid-19 in Brasilândia</u>.

The project was published by <u>Outriders</u>, a non profit newsroom covering global issues having local impact. It is available in 4 languages: English, Portuguese, Spanish and Polish.

4.13 Satélites, mapas e trajeto do boi: saída para reduzir desmatamento já opera no Brasil

Authors: Naira Hofmeister, Fernanda Wenzel, Pedro Papini **Keywords:** Food storage, environmental conservation

Media Outlet: (o)eco

Country and language: Brasil, Portuguese **Date of publication:** 29 September 2020

Link:https://oeco.org.br/reportagens/satelites-mapas-e-traieto-do-boi-saida-para-red

uzir-desmatamento-ja-opera-no-brasil/

Problem

Increasing of deforestation in the Amazon, Brasil

Solution

Combining existing data from satellites, maps, and records of cattle movements to reduce deforestation

Solution method involved

Data analysis and visualization

Description

This story (Translated title: "Satellites, maps, and the cattle's path: solutions to



reduce deforestation are already happening in Brazil") investigates a possible solution to deforestation in the Amazon: a set of tools already available and even in use in Brazil, although in a disjointed way, might be the key. According to data from the Trase platform, which investigates the relationship between commodities and deforestation, in 2018, 80% of the areas where deforestation occurred in the region became pastureland - and the irregular cattle raised in this system end up on the meat trays sold by the country's major brands, despite the public agreements that the industry has signed to commit to sweeping the harmful practice from its production chains.

For these reasons, the proposed approach combines different data: the public information on deforestation generated by satellites of the National Institute for Space Research, the federal government's "dirty list" of slave labor and the Ibama's record of fines and embargoes, in addition to the perimeters and conservation obligations of the properties that appear in the Rural Environmental Registry and the records of cattle movements between farms documented by the Animal Transit Documents. They are distinct systems, but that unified in a mechanism directed to guarantee environmental regularity can mean a competitive differential for the national industry, helping to reconcile the agendas of environmentalists and businessmen in the Amazon.

The authors use a variety of sources and provide data analysis and visualization (tool used: Flourish). This story is published by the environmental journalism website (o)eco, which is also a non-profit association. It is considered one of the largest environmental vehicles in Brazil

4.14 Como os indígenas no Brasil têm se organizado para monitorar o aumento de incêndios em seus territórios

Authors: Maurício Angelo

Keywords: Wildfires prevention (monitoring through apps by indigenous people)

Media Outlet: Mongabay

Country and language: USA/Brasil, Portuguese

Date of publication: 29 September 2020

Link: https://oeco.org.br/reportagens/satelites-mapas-e-trajeto-do-boi-saida-para-red

<u>uzir-desmatamento-ja-opera-no-brasil/</u>

Problem

Fires inside indigenous lands



Solution

Wildfires prevention: monitoring through apps by indigenous people

Solution method involved

Community engagement, technology

Description

Fires inside indigenous lands with records of isolated peoples increased 259% in Brazil in 2019. This story (translated title: "How indigenous people in Brazil have organized themselves to monitor the increase of fires in their territories") explores the possible solution carried on by indigenous organizations, who are joining together to fight fires and act in prevention.

The proposed solution is an app called Alerta Clima Indígena ("Indigenous Climate Alert") developed by the Instituto de Pesquisa Ambiental da Amazônia ("Amazon Environmental Research Institute" with support from the government of Norway. The application registers the monthly average of heat spots and the risk of fire in the coming days, besides allowing the advance of deforestation in and around each indigenous land.

Coiab (Coordenação das Organizações Indígenas da Amazônia Brasileira - "Coordination of Indigenous Organizations of the Brazilian Amazon") will soon launch this app, with the objective of mapping daily the outbreaks of fires in indigenous lands in the Amazon and making it possible for indigenous users to register in real time the fires observed directly in their territory. This solution revolves around a strong community engagement, key of the success of the initiative. A complementary Action Plan will be developed by Coiab for the next few years in response to the fires.

4.15 Las claves del éxito de Nueva Zelanda en la lucha contra la Covid-19

Authors: Xavier Vidal **Keywords:** Covid-19

Media Outlet: La Vanguardia

Country and language: Spain, Spanish **Date of publication:** 26 May 2020

Link: https://www.lavanguardia.com/participacion/lectores-corresponsales/2020052 6/481384618970/claves-exito-nueva-zelanda-lucha-control-covid-19-pandemia.html



Problem

Covid-19 outbreak in New Zealand

Solution

The efficient strategies implemented by the New Zealand government

Solution method involved

Risk communication and management

Description

This article (translate title: "New Zealand's key of success in the fight against Covid-19") explains how with 5 million inhabitants and only 21 deaths and no new cases (on May 28, 2020) New Zealand acted quickly, effectively, with unity and empathy, closed borders, communicated very well and prioritized health.

The story was published (in Spanish) in the online newspaper La Vanguardia. The most interesting part is that the author summarizes the best practice adopted in new Zealand by Prime Minister Jacinda Ardern's Labour government, in particular:

- Prioritization of the health and welfare of the population over economic interests.
- Realism in assessing the true risk of the pandemic without underestimating its danger.
- Political unity across the parliamentary spectrum.
- Early and forceful action and response.
- Comprehensive, clear, and continuous communication, responding to all issues raised and reaching out to the public through all possible channels and technologies.
- Empathy with the needs and suffering of the population and companies.
- Effective, direct, and immediate economic measures and aid.
- Extensive capacity to test the population.
- Wide availability of sanitary material at all times (masks, gloves, respirators, etc).
- Good medical infrastructure (equipment, ICU beds, personnel).

Of course, all of this is applied to the first phase of the Covid-19 outbreak (the article was published in May 2020). Yet, it is interesting to note that the good practices highlighted in this article can be seen as an attempt to identify a successful case of risk communication and management, that might be potentially applied to other countries and different situations.

4.16 In face of rising sea levels the Netherlands 'must consider



controlled withdrawal'

Authors: Rolf Schuttenhelm Keywords: Climate crisis Media Outlet: Vrij Nederland

Country and language: The Netherlands, English,

Date of publication: 7 February 2019

Link:https://www.vn.nl/rising-sea-levels-netherlands/

Problem

Sea level rise in The Netherlands

Solution

Long-term "controlled withdrawal"

Solution method involved

Experts' proposals

Description

The Netherlands is famous for its polders and dikes. But now these solutions to the problem of sea level rise might not be enough, as the sea is also increasing in volume, and sea level rise will probably go faster than we had initially thought.

The article reports interviews with various Dutch sea level specialists, "whose concerns have thus far largely been confined to discussions in their own circles".

In fact, the main possible solution emerging is quite unusual in Europe: a controlled withdrawal over the long term. In this view, the most dangerous coastal areas in the Netherlands should be progressively evacuated. In particular, the Dutch experts interviewed in the story outline a withdrawal scenario that might start in the 22nd century: "the Central Netherlands and Drenthe will become capes in a new coastline". This proposal might be considered a "scaring" kind of solution journalism. Yet, it seems to be effective in raising people's awareness about the climate crisis: it is not something far away, affecting the Arctic and distant places. It is something that, in a near future, may lead to a mass of climate refugees, and this also applies to Europe.

4.17 De grote klimaatgids: dit kan jij zélf doen tegen klimaatverandering



Authors: Emy Demkes, Rutger Bregman, Riffy Bol, Jelmer Mommers

Keywords: Climate crisis

Media Outlet: De Correspondent

Country and language: The Netherlands, Dutch

Date of publication:

Link: https://decorrespondent.nl/10792/de-grote-klimaatgids-dit-kan-jij-zelf-doen-teg

en-klimaatverandering/2451219983520-0508258f

Problem

Individual impacts on climate

Solution

Easy-to use solutions to reduce our impact on our planet

Solution method involved

Public awareness

Description

This article published in Dutch on De Correspondent (translated title: "The big climate guide: you can do this yourself against climate change") is a set of practical everyday solutions to address the climate crisis and reduce our impact on planet Earth. The starting point is the approval of the Climate Act by the Senate of The Netherlands. In 2030, the country should emit 49 percent fewer greenhouse gases compared to 1990. In 2050 at least 95 percent.

As highlighted by this article, we are talking about a revolution and a huge renovation of the whole country. This means people need to act together, on a large scale.

The story continues with 48 questions and answers about making our everyday life more sustainable. It also helps people understand how much greenhouse gases they emit and how. Then you can look for the most effective measures.

This solution journalism approach revolves around public awareness and community engagement, addressing a global issue in a practical, local, an yet potentially effective way.

4.18 sensor.AFRICA AIR

Authors: sensors.AFRICA citizen journalists and citizen scientists

Keywords: Pollution air quality, environmental data **Media Outlet:** own website and various outlets

Country and language: Kenya, English



Date of publication: January - April 2019

Link: https://sensors.africa/air

Problem

Covid-19 outbreak in Kano State, Nigeria, in March-April 2020

Solution

Innovative community testing strategy introduced by the government of Kano State: mass voluntary community testing

Solution method involved

Citizen science

Description

sensors.AFRICA is a pan-African citizen science initiative that uses sensors to monitor air, water, sound and radiation to give citizens actionable information about their cities. The <u>Air</u> section focuses on air pollution and air quality: the project puts together journalists, activists and members of the civil society to gather their own data on the matter.

The project shows the great potential of a solution journalism approach through citizen science. It brings together an already existing community of practitioners (the Code for Africa Labs, an organization of "civic technology and data journalism labs, with teams in 20 countries") with local journalists in highlighting the lack of information on these health-related issues. At the same time, its development is largely based on the engagement of local communities through the local media outlets where the stories have been published.

The stories were possible only thanks to a joint effort of people with different backgrounds and experiences: tech enthusiasts able to work with chip sensors and data gathering, and journalists and their reporting ability.

The air quality sensors developed by sensors.AFRICA use open source technology from the Luftdaten project. The initiative was seed-funded by innovateAFRICA.

4.19 Liberian women leading the way in tackling plastic pollution

Authors: Tina Mehnpaine

Keywords: pollution, social empowerement

Media Outlet: African Women in the Media (AWiM)

Country and language: Africa, English

Date of publication: 4 April 2022



Link:https://awimnews.com/liberian-women-leading-the-way-in-tackling-plastic-pollution/

Problem

Plastic pollution in Liberia, Africa

Solution

Liberian women group leading initiatives to fight plastic pollution in Monrovia, the capital of Liberia

Solution method involved

Community building, gender, social empowerement

Description

In Liberia, Africa, the plastic pollution is bad. The government of Liberia does not have any recycling method to address plastic pollution. Both public and private waste end up in landfills and the environment thereby causing flooding.

The article tells the story of a group of Liberian women in Monrovia leading a series of initiatives to address this problem. They started a recycling movement to turns plastic waste into tiles, which were used to pavement some streets. This also led to a viryuous cycle of new job opportunities.

In the end, the group was able to buy a machine that helped them shear the plastic. After shearing, they melted the plastic, and then mixed it with sand to produce the pavement tiles and bricks.

The article was published in <u>African Women in Media</u>, an online magazine that started as a Facebook group in August 2016 with the aim to positively impact the way media functions in relation to African women.

4.20 How Sweden Sends Just 1% of Its Trash to Landfills

Authors: Klaus Sieg

Keywords: Pollution, trash, energy **Media Outlet:** Reasons to be Cheerful **Country and language:** Sweden, English

Date of publication: 8 April 2022

Link: https://reasonstobecheerful.world/waste-to-energy-sweden-power-plants/

Problem



Unsustainable growing of landfills in many countries

Solution

Sweden incinerates nearly half its garbage to create the energy that powers its homes and buildings

Solution method involved

Sustainable technology

Description

As the world is facing an unsustainable growth of landfills, Sweden, a country that sends less than one percent of its waste to landfills, offers an alternate path. The article reports on this possible solution to reduce the garbage pollution in Sweden. Much of Sweden's success in reducing landfill waste can be credited to its high recycling rates: between recycled solid waste and composted organic matter, Sweden recycles nearly half of what it throws away. But what it does with the other half is the real innovation: nearly all of Sweden's non-recycled waste is burned to generate electricity and heat. It's a method that, while emitting CO2, is far better for the climate than sending garbage to landfills, according to the Swedish government and proponents of waste-to-energy technology.

The article was published in <u>Reasons to be Cheerful</u>, a non-profit editorial project founded by artist and musician David Byrne Its goal is telling "stories that reveal that there are, in fact, a surprising number of reasons to feel cheerful".

6. CONCLUSIONS

Solution and constructive journalism challenge the traditional role of journalists of holding power accountable and denouncing what is not working in our society. While this approach remains a crucial pillar of good investigative journalism, it often gets out of hand in mainstream media, as Covid-19 broadly demonstrated around the world.

The model proposed by solution and constructive journalism can be a very effective complementary approach, shining a light on the possible solutions to the challenges we globally face. A few years ago, this could be considered a highly innovative approach. Today, solution journalism is a well-established (even if still not well-known) practice, and we would consider it a **set of methods** rather than a revolutionary approach.

This is particularly evident in the 20 case studies we analyzed, which highlight a strong focus on a **community-centered method**. Almost all the selected examples share some characteristics:

- They reported on a specific solution to a specific problem;
- They presented the local advantages of the presented solutions, that in some cases can also be scalable;
- They involved a specific community.

The most innovative stories are probably the ones taking place in less developed countries, where the "theory" about solution journalism techniques is perhaps more recent. And yet, these stories seem to get the real sense of solution journalism, identifying real needs (such as the lack of Covid-19 tests in Nigeria or the pollution problem in Liberia) and addressing them with real solutions.

Overall, there are some aspects that according to our analysis can characterize a good (science) solution journalism:

- A positive but still critical approach (not just reporting "good news")
- A focus on practical solutions that are making or can make a difference for a local community
- A general perspective, allowing to draw a bigger picture through local examples
- A high level of engagement (often used as a solution journalism method)



- A call to action, when possible
- An inspiration for readers, even living in distant places
- A transparent approach as a secondary positive effect of the methods involved.

This research is part of the broader effort (carried out within WP7) of exploring the current landscape of science media through the prism of engagement (D 7.1), data (D7.2), innovation (D7.3) and solutions (D7.4).

This report will feed the **ENJOI Observatory for Outstanding Open Science Communication**, as a reference to work in the direction of constructive journalism to foster the translation of scientific knowledge and data into actionable solutions to people's problems.

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