HOW TO CONTRIBUTE CLIMATE CHANGE INFORMATION TO WIKIPEDIA

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FUTURE CLIMATE FOR AFRICA

How to contribute climate change information to Wikipedia

Climate & Development Knowledge Network

A guide for researchers, practitioners and communicators

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About this guide

This publication shares guidance and tips on how to edit Wikipedia. It is intended for researchers, practitioners, communicators and any others with access to climate change information who would like to share it more widely with the world.

Wikipedia is a powerful platform to make climate change information accessible to all. However, people working in the climate change field often overlook Wikipedia as an outreach channel. For researchers, emphasis is typically placed on academic publications, and for practitioners, communication typically takes place through specialist publications, reports and briefs. However, Wikipedia can be used to communicate information from these outputs to a different (and wider) audience.

This guide has been written by communications and knowledge management specialists from the Climate and Development Knowledge Network (CDKN); the Coordination, Capacity Development and Knowledge Exchange (CCKE) unit of the Future Climate for Africa (FCFA) programme; as well as Kulima Integrated Development Solutions. Our aim is to show that although editing Wikipedia can seem daunting at first, once you are familiar with the Wikipedia style and editing norms, it is relatively easy to contribute.

We outline why Wikipedia is a powerful tool for sharing robust, verified climate change information in the digital domain, and why more female editors and editors from developing countries are critical to make Wikipedia's information more relevant, localised and representative of the 'sum of human knowledge'.

We provide step-by-step guidance on how to edit articles on Wikipedia, along with tips and suggestions on style and structure to make your editing process a smooth one. We also provide guidance on how to get involved with the Wikipedia editing community, and share our experience of organising a Wikipedia 'edit-a-thon' so that you can arrange your own online or face-to-face editing events. Edit-a-thons are where a group of people come together, in person or virtually, to edit Wikipedia on a particular topic and can be a good way to improve the quality of information and encourage people to become long-term contributors.

Wiki4Women Wikipedia workshop at UNESCO Headquarters in Paris, March 2019 – one of 60 events organised as part of International Women's Day to address Wikipedia's gender gap (*UNESCO via **Wikimedia***)

Key to this guide

Throughout the guide you will find inserts that provide additional help.

Bold, blue text indicates a hyperlink.

About the authors

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[1] Why Wikipedia is an important tool to communicate climate change information

'Climate emergency' was identified as the phrase of the year in 2019 by the *Oxford English Dictionary*. By the end of the year, 19 countries and numerous local government authorities across the world had declared a climate emergency. The year 2019 also saw an increase in prominence of citizen environmental activist movements such as Extinction Rebellion and Fridays for Future. There is now more need than ever for climate change knowledge to be communicated beyond the academic audience.

Wikipedia is a key channel to enable sharing of climate change information between the scientific and policy communities, as well as the general public. Wikipedia entries provide encyclopedia-style, concise overviews of topics, including controversies and their evolution over time, and sources of further information. They are therefore particularly useful as a first port of call for anyone seeking information about a topic, which makes it even more important that they are accurate and succinct.

Policymakers, practitioners and, increasingly, concerned citizens and the youth are demanding access to climate change information. Wikipedia is freely accessible to anyone with an internet connection – unlike academic journal articles, which are often hidden behind a paywall. In addition, the platform's style guidelines seek to ensure not only the use of neutral language in developing encyclopedia-style entries, but also diversity in terms of both editors and contributions.

Extinction Rebellion protests in Buenos Aires, Argentina in September 2019 (***Extinction Rebellion Argentina***)

A woman working on her vegetable farm in Khulna, Bangladesh, April 2014 (*M. Yousuf Tushar, WorldFish via* ***Flickr***)

"I think it's important for researchers to contribute to Wikipedia mostly in terms of their scientific research because not everyone … can easily access journal documents. Some of them you have to pay for.

Namibian participant, Africa climate change edit-a-thon, August 2019

1.1 Enhancing the quality of online climate change information

As a pioneer of the open knowledge movement, Wikipedia relies on voluntary content editors to create and update its nearly 50 million articles (in various languages). In the era of fake news and misinformation, particularly on social media, this active community of editors questioning and vetting contributions as well as following up on the required citing of reliable sources, are two of the mechanisms Wikipedia uses to ensure quality content. This relative reliability of Wikipedia makes the platform an important tool for sharing robust climate change information more widely in the digital domain (see **section 3** on the reliability of Wikipedia).

It also follows that the more specialists who contribute to Wikipedia, the more reliable its content is likely to be. A number of climate change-related articles are classified as 'high importance', meaning they are about 'well-known issues'. But with scientific knowledge on climate change advancing rapidly, there is a great need to ensure that up-to-date information is reflected on Wikipedia. Climate change practitioners and researchers need to contribute to Wikipedia to ensure high-quality information on climate change is open-access and freely available online to the general public.

1.2 Sharing your work more widely

In addition to enhancing the global knowledge base on climate change, using Wikipedia also helps to further the reach of research and knowledge. Wikipedia entries often have high rankings on internet search result pages, driving many visitors to Wikipedia articles. Research in 2013[1] found that the majority (51%) of online climate information users surveyed used generic search engines like Google as their starting point, as opposed to specific climate change knowledge portals, and Wikipedia is highly optimised on Google. Thompson and Hanley (2018)[2] also found that scientific articles referenced in Wikipedia receive more citations.

1.3 Why researchers should use Wikipedia to boost the impact of their work

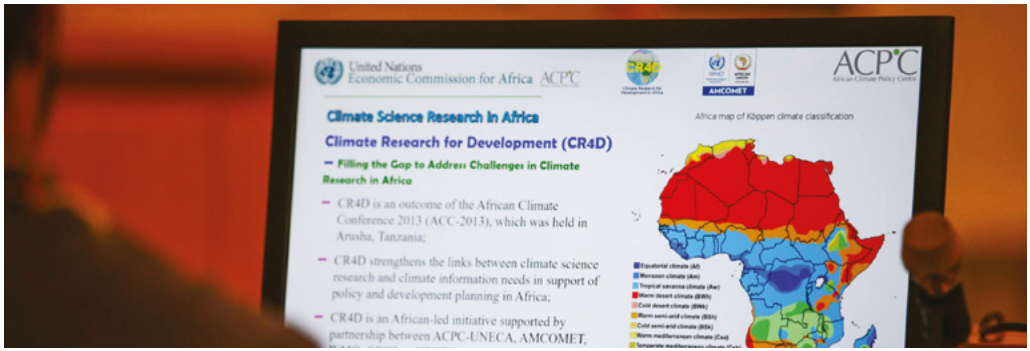
To date, Wikipedia has largely been underutilised for sharing research findings. However, as a result of its reach and diverse audience, Wikipedia can improve the impact of research. Let's illustrate this with an example. In late 2019, a group of well-known climate change researchers received the news from a journal publisher that a paper they had co-authored[3] received the distinction of being a 'Top cited article'.

The Altmetric attention score for this paper – which ranks the quality and quantity of online attention the paper received – puts it in the top 25% of all research outputs ever tracked by Altmetric. The paper was cited 15 times in the 18 months since its publication (as an open-access article).

In comparison, the **Climate change adaptation** article on Wikipedia at the time of writing received on average about 8,000 views per month. In the eight months following the August 2019 Africa climate change edit-a-thon, when significant additions to the article were made, the Wikipedia climate change adaptation page had been viewed over 72,000 times.

Whilst citations from an academic journal and pageviews for a website are not directly comparable, it does give an indication of the difference in magnitude of audiences of the two different channels. That creates a compelling motivation for researchers to use Wikipedia to communicate research findings.

> **"I generate a lot of information and material through my research and sometimes I am not able to reach as many people, but with the new knowledge on how to edit Wikipedia I will be able to reach a wider audience.**
>
> *Kenyan participant, Africa climate change edit-a-thon, August 2019*



Presentation on climate science research in Africa at the African Climate Risks Conference, October 2019 (***Kiara Worth, IISD***)

[2] What is Wikipedia?

Wikipedia is a free online encyclopedia launched in 2001. Its vision is a 'world in which every single human being can freely share in the sum of human knowledge'.[4] Articles are open source and are constantly being updated and improved, with editors making thousands of edits per minute.[5] With more than 20 billion pageviews every month[6], Wikipedia has significantly more reach than any other climate change website or knowledge portal. The English version of Wikipedia includes over six million articles and averages over 600 new articles per day[7] (see **section 2.3** on editing in other languages below). Wikipedia is supported and hosted by the Wikimedia Foundation, a non-profit organisation based in California.

A group of volunteer editors from the Ghana User Group, September 2019 (*Mwintirew via* ***Wikicommons***)

> **"It was fascinating to learn that Wikipedia is the largest encyclopedia, and the most wide-ranging compilation of accessible knowledge to exist in the history of humanity.**
>
> *Zimbabwean participant, Africa climate change edit-a-thon, August 2019*

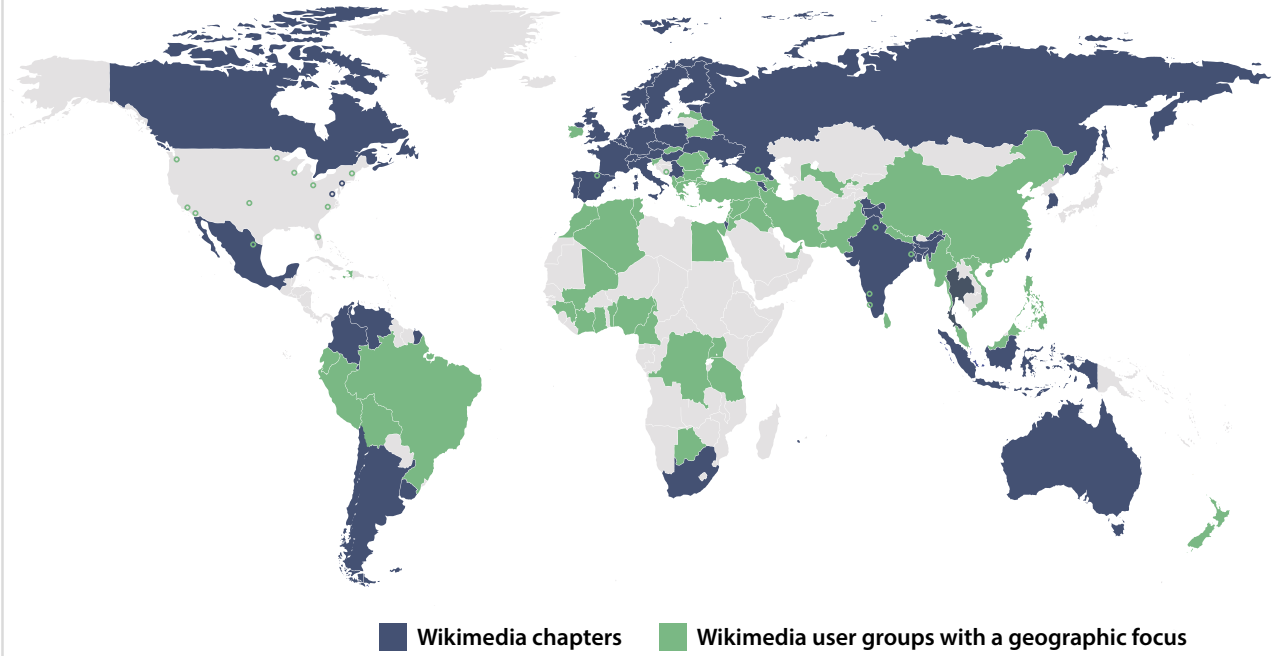
2.1 The Wikimedia movement

'Wikimedia is the collective name for the Wikimedia movement, revolving around a group of interrelated Wikimedia Foundation projects, including Wikipedia, which aim to use the collaborative power of the internet to create and share free knowledge of all kinds'.[8] Although there is no formal institutional structure regulating the Wikimedia movement, the Wikimedia Foundation recognises various 'models of affiliation', which include chapters, thematic organisations and user groups.[9]

- **Chapters** (39 in total) – independent non-profits representing the Wikimedia movement, focused within a specific geography.
- **Thematic organisations** (2 in total) – independent non-profits representing the Wikimedia movement and supporting work focused on a specific theme, topic, subject or issue within or across countries and regions. There were two at the time of writing, on medicine and Amical (focused on the Catalan language and culture).
- **User groups** (135 in total) – open membership groups with an established contact person and history of projects, designed to be easy to establish.

Figure 1 shows the location of chapters and user groups globally.

FIGURE 1 Map of geographic-based affiliates, as of June 2020[10]



For more about chapters, thematic organisations and user groups, visit:

- **https://meta.wikimedia.org/wiki/Wikimedia_chapters**
- **https://meta.wikimedia.org/wiki/Wikimedia_thematic_organizations**
- **https://meta.wikimedia.org/wiki/Wikimedia_user_groups**

2.2 Who edits Wikipedia?

Anyone can edit Wikipedia. All you need is a computer, an internet connection and reliable information to share. However, despite striving for neutrality and a diversity of contributors and knowledge, Wikipedia struggles with what it has termed 'systemic bias' in terms of who is editing the platform – tending towards specific cultural and social perspectives.[11]

The average Wikipedia editor on the English website is male and from a developed country. Surveys have estimated that between 8.5% and 16% of editors are female and, as a result, there are fewer articles about women or topics important to women.[12] In 2015, only 20% of Wikipedia editors came from the Global South.[13] There is a lack of content from Africa in particular and the continent has the fewest Wikipedia contributors per capita of any other region. For example, from October to December 2014, Africa contributed only about 1.3% of the world's edits.[14]

For these reasons it is essential that editors representing a diversity of genders, perspectives, languages, and forms of knowledge, including traditional and oral knowledge, contribute to the platform. For a complex issue such as climate change, involving a multitude of sectors and disciplines where climate change impacts and adaptation options are highly contextual and place-specific, this is all the more important.

> **Most articles in Wikipedia, especially English language Wikipedia, and ... other ... global languages, cover topics on the Global North such as European topics, North American topics ... whereas topics related to Africa are very poorly covered... There is a great need for more people in Africa to be editing Wikipedia.**
>
> *Douglas Scott, President Wikimedia South Africa*

Oral and traditional knowledge on Wikipedia

Despite numerous challenges, people are experimenting with ways of adding oral information and history to Wikipedia. For example, there are initiatives to document the oral histories and culture of the African diaspora,[15] and to collect oral indigenous knowledge of the OvaHerero community in Eastern Namibia and convert it to citations on Wikipedia.[16]

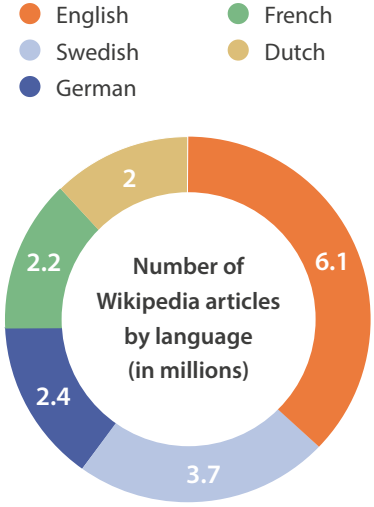
2.3 Editing in other languages

To begin to tackle the lack of diversity, and make online climate change information more relevant and accessible, it is imperative for contributors to edit in different language Wikipedias. This will help to ensure locally important topics and climate change issues are covered in local languages. At the time of writing there were 312 different language editions of Wikipedia, 302 of them active.[17]

The largest language Wikipedias in terms of article count include:

- English (about 6.1 million articles), Swedish (about 3.7 million articles), German (about 2.4 million articles), French (about 2.2 million articles) and Dutch (about 2 million articles).
- 11 other Wikipedias have **more than a million articles** each: Russian, Italian, Spanish, Polish, Waray-Waray, Vietnamese, Japanese, Chinese, Arabic, Portuguese and Ukrainian.
- Five more have **over 500,000 articles**: Persian, Catalan, Serbian, Indonesian, and Bokmål (Norwegian).
- 42 have **over 100,000 articles**, including Hindi, Tamil, Urdu and Thai.
- 84 more have **over 10,000 articles**, including Swahili, Yoruba, Bengali and Nepali.

Top five Wikipedias by language (August 2020)*



**The Cebuano-language edition of Wikipedia has more than 5 million articles, but over 99 percent of these were created by bots.*[18]

A meeting of Digital Activists of Indigenous Languages in Bogotá, Colombia, June 2015 (*Diego F. Gómez via **Wikicommons***)

Find a full list of different language Wikipedias here:
https://en.wikipedia.org/wiki/List_of_Wikipedias

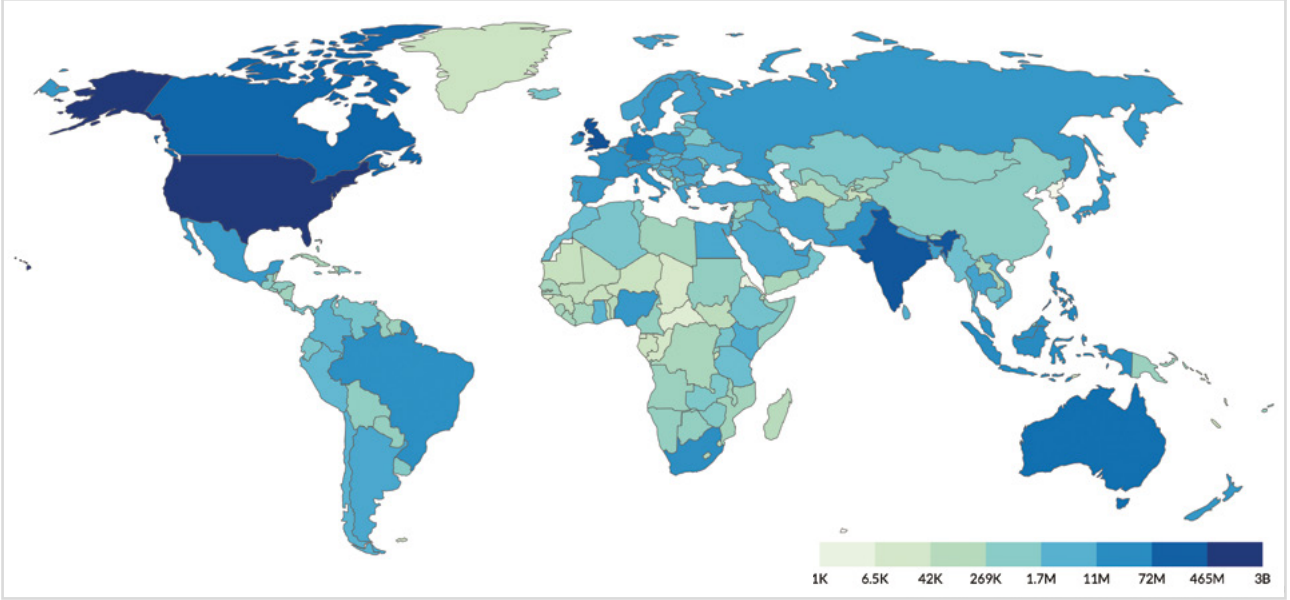
Participants at a ***WikiEducator*** workshop to create free e-learning content in New Delhi, India (*Niyam Bhushan via* ***Flickr***)

2.4 Who reads Wikipedia and why?

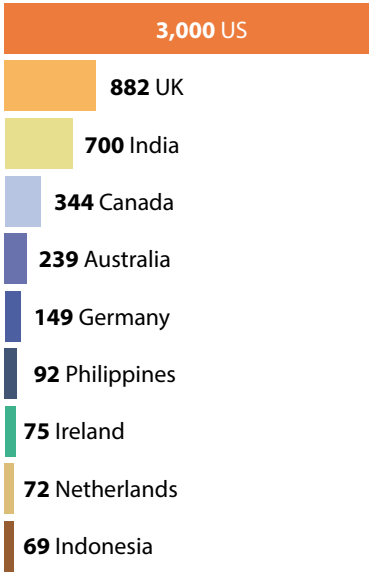
Wikipedia tracks total numbers of pageviews, including pageviews by country for different language Wikipedias. However, not much data is available on which specific stakeholder groups are reading Wikipedia, and why.

For English Wikipedia during the month of June 2020,[19] the top 10 highest pageviews were from the United States (3 billion views), the United Kingdom (882 million), India (700 million), Canada (344 million), Australia (239 million), Germany (149 million), the Philippines (92 million), Ireland (75 million), the Netherlands (72 million) and Indonesia (69 million). African countries are not represented in the top 10 for pageviews. The highest-ranking African countries are South Africa (62 million), Nigeria (39 million) and Egypt (18 million). In Latin America, the high-ranking countries are Brazil (58 million), Argentina (18 million) and Chile (11 million).

FIGURE 2 **Pageviews by country for English Wikipedia** in June 2020



Top 10 pageviews by country for June 2020



Some research was undertaken in 2017 on why readers use Wikipedia across different language editions.[20] The large-scale survey engaged readers of 14 Wikipedia languages, and more than 210,000 responses were received. The survey found that across all languages, Wikipedia is visited almost equally by readers for fact-checking (35%), obtaining an overview (33%) or getting an in-depth understanding (32%). However, within languages there were significant differences across these information needs.

One of the survey's main conclusions was that a country's socio-economic circumstances (specifically the Human Development Index) is a key determinant of how Wikipedia is used. Readers from less developed countries are more likely to read articles in-depth and be motivated by work/school or intrinsic learning. Socio-economic differences also show up in different topics being viewed: science-oriented topics are more important to less developed countries, while entertainment-oriented topics are more common in industrialised countries.

These results confirm the importance of editing climate change-related topics to provide readers from less developed countries with additional knowledge resources to support their climate change response efforts and decision-making.

Finding pageviews by country

You can use Wikipedia's **statistics tool** to find out the total pageviews by country for different language Wikipedias and WikiProjects.

- Wikipedia statistics: **https://stats.wikimedia.org/#/all-projects**
- Pageviews by country: **https://stats.wikimedia.org/#/all-projects/reading/page-views-by-country/normal|map|last-month|~total|monthly**

One of Wikimedia Ghana User Group's monthly meet ups dedicated to improving English Wikipedia, 2016 (*Sandister Tei via **Wikicommons***)

[3] Is Wikipedia's information reliable?

As with any open-source platform, there have been debates about the reliability of Wikipedia's information since the website's establishment. However, Wikipedia is becoming increasingly recognised as an accurate knowledge source, with journals like ***Nature*** finding some of its scientific content to be of similar quality to a professional encyclopedia.[21] The power of Wikipedia is that it is a living reflection of our state of knowledge, and therefore requires continuous improvement as our understanding of the world develops and shifts.

Despite being comparable to other encyclopedias, certain topics are still poorly covered (see **section 3.4** on the quality of climate change-related content).

3.1 Citing sources

Wikipedia has a number of checks and balances to ensure the accuracy of content added. One of the most important of these is citing sources, as it enables readers to check that information comes from a reliable outlet (see **Wikipedia's verifiability policy**[22]). Wikipedia does not publish original research, but intends to reflect knowledge already in existence. All new edits, therefore, should cite a verifiable information source. Any material that needs a citation but does not have one should be removed, according to Wikipedia policy.

When citations are not provided, this omission is clearly indicated in the article. The reader then immediately knows what information is untrustworthy. For example, **Figure 3** shows a section of the climate change adaptation article where citations and further information are required.

FIGURE 3 Citations and further substantiations needed for a section of the Wikipedia Climate change adaptation article, accessed in July 2020

Criteria for assessing responses [edit source]

James Titus, project manager for sea level rise at the U.S. Environmental Protection Agency, identifies the following criteria that policy makers should use in assessing responses to global warming: economic efficiency, flexibility, urgency, low cost, equity, institutional feasibility, unique or critical resources, health and safety, consistency, and private v. public sector.[34]

Differing time scales [edit source]

Adaptation can either occur in anticipation of change (anticipatory adaptation), or be a response to those changes (reactive adaptation).[35] Most adaptation being implemented at present[*when?*] is responding to current climate trends and variability,[*citation needed*] for example increased use of artificial snow-making in the European Alps. Some adaptation measures, however, are anticipating future climate change, such as the construction of the Confederation Bridge in Canada at a higher elevation to take into account the effect of future sea-level rise on ship clearance under the bridge.[36]

Much adaptation takes place in relation to short-term climate variability, however this may cause maladaptation to longer-term climatic trends. For example, the expansion of irrigation in Egypt into the Western Sinai desert due to a period of higher river flows is a maladaptation when viewed in relation to the longer term projections of drying in the region[37]). Adaptations at one scale can also create externalities at another by reducing the adaptive capacity of other actors. This is often the case when broad assessments of the costs and benefits of adaptation are examined at smaller scales and it is possible to see that whilst the adaptation may benefit some actors, it has a negative effect on others.[35]

Women pick tea leaves in Mulanje, Malawi in December 2016 (*Katharine Vincent*)

3.2 Review mechanisms

There is no formal peer review process for Wikipedia, where reviewers approve content before publication. However, the community of editors watching specific topics and pages serves as a review mechanism *after* publication, when editors can review your edits and debate and reverse them if necessary.[23] The constant iteration of the text by a variety of editors can get it to the stage of being robust, but it requires subject matter experts contributing and reviewing content. There are other avenues to seek expert input, however, including going via WikiProjects, set up for different topic areas (see **section 3.3**) or contacting specific editors on the **Wikipedia peer review volunteers list**.[24]

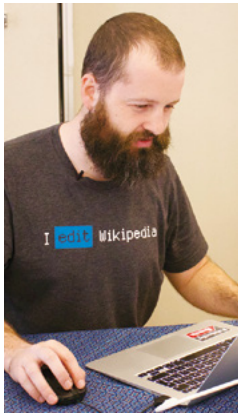
> **What ensures or helps improve Wikipedia's accuracy and reliability as a trustworthy source of information is peer review. Getting area experts to also participate in the peer review mechanism of Wikipedia greatly enhances the quality and reliability of articles.**
>
> *Douglas Scott, President of Wikimedia South Africa*

For more information on peer review or the peer review volunteers list, visit:

- **https://en.wikipedia.org/wiki/Wikipedia:Peer_review**
- **https://en.wikipedia.org/wiki/Wikipedia:Peer_review/volunteers**

3.3 How editors work together on similar topics

Wikipedia is generally edited by a dispersed group of individual editors. However, if editors would like to work together to improve Wikipedia they can form a **WikiProject**.[25] WikiProjects are open groups that welcome new members and often consist of sub-groups or task forces. There are a number of WikiProjects related to climate change and a **WikiProject Climate Change** became active in 2019. At the time of writing, the WikiProject Climate Change had **36 active editors**.[26] This is a relatively small number given the scale and complexity of the topic, and the links with many other topics on Wikipedia.



President of Wikimedia South Africa, Douglas Scott, at the Africa climate change edit-a-thon, August 2019 (*CDKN & FCFA*)

TABLE 1 A selection of active climate change-related WikiProjects (*please note this is not an exhaustive list*)

NAME	PURPOSE	SUB-GROUPS
WikiProject Climate Change	Improving articles related to any climate change throughout Earth's history, including human-caused global warming	• Africa climate change task force
WikiProject Environment	Organising and improving articles related to the natural and biophysical environment	• Climate change task force • Sustainability task force • Environmental record task force • Green vehicle task force
WikiProject Agriculture	Developing and improving articles related to crop production, livestock management, aquaculture, dairy farming and forest management	• Agricultural education • Beekeeping • Livestock
WikiProject Meteorology	Better organising information in articles related to meteorology	• Forecasting and warnings • Hurricanes/tropical cyclones • Non-tropical/winter storms • Severe weather • Floods • Droughts and fire events • Extremes in temperature • Weather data and instrumentation • General meteorology (essentially anything which does not fall into the above categories)
WikiProject Disaster Management	Improving the coverage of disaster management on Wikipedia	None
WikiProject Ecology	Improving Wikipedia's articles and coverage about ecological topics	None
WikiProject Energy	Better organising information in articles related to energy policy, production, technologies and sources	None
WikiProject Urban Studies and Planning	Thoroughly exploring urban studies and planning – globally and historically – and improving urban studies and planning related articles	None

3.4 Quality and importance ratings of climate-related content

WikiProjects (and task forces) rate articles in terms of quality and importance, identify what content needs to be improved, and help to strengthen and track the evolution of articles over time. At the lower end, articles are graded as '**stub**', which is a very basic description of the topic, all the way to 'FA' or '**feature articles**', which have gone through substantial 'in-depth' examination by 'impartial reviewers'.

By July 2020, only five climate change-related articles had been given the highest quality grading of 'feature articles'. These were **Climate change**, **Climate of India**, **Cirrus cloud**, **Retreat of glaciers since 1850** and **Renewable energy in Scotland**. The majority (1,956) were '**stub**', '**start**' or '**C-class**' articles (see **Table 2**).

Articles are also graded in terms of **importance** for the particular topic area. In July 2020, there were **22 articles** identified as of 'top' importance by WikiProject Climate Change, but are classified as **C-class** articles, which are substantial but still lack important content or contain irrelevant information.[27] These included articles such as **Climate change adaptation**, **Regional effects of global warming**, **Climate justice**, and **Sustainable energy**. **Figure 4** on page 22 shows the WikiProject Climate Change's **grading by quality and importance** for over 2,336 climate change-related articles in July 2020. Most are graded as 'start' and 'stub' articles, showing significant room for improvement.

To find out more about WikiProjects and the WikiProject Climate Change, visit:

- **https://en.wikipedia.org/wiki/Wikipedia:WikiProject**
- **https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Climate_change**

Finding article gradings

To find out the quality and importance grading of a specific article, navigate to the 'Talk' section of the page (see section 4.7). This page will show you how specific WikiProjects interested in the article have graded it. To find out how the WikiProject Climate Change has graded the quality and importance of all Wikipedia's climate change articles visit:

- **https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Climate_change/Assessment**

TABLE 2 WikiProject article grading scheme[28]

Class	Criteria
FA	**Feature article** **Reader's experience**: Professional, outstanding and thorough; a definitive source for encyclopedic information. **Editing suggestions**: No further content additions necessary unless new information becomes available.
FL	**Feature list** **Reader's experience**: Professional standard; it comprehensively covers the defined scope, usually providing a complete set of items, and has annotations that provide useful and appropriate information about those items. **Editing suggestions**: No further content additions necessary unless new information becomes available.
A	**A-class** **Reader's experience**: Very useful to readers. A fairly complete treatment of the subject. A non-expert in the subject would typically find nothing wanting. **Editing suggestions**: Expert knowledge may be needed to tweak the article, and style problems may need solving.
GA	**Good article** **Reader's experience:** Useful to nearly all readers, with no obvious problems; approaching (but not equalling) the quality of a professional encyclopedia. **Editing suggestions**: Some editing by subject and style experts is helpful; comparison with an existing featured article on a similar topic may highlight areas where content is weak or missing.
B	**B-class** **Reader's experience**: Readers are not left wanting, although the content may not be complete enough to satisfy a serious student or researcher. **Editing suggestions**: A few aspects of content and style need to be addressed. Expert knowledge may be needed.
C	**C-class** **Reader's experience**: Useful to a casual reader, but would not provide a complete picture for even a moderately detailed study. **Editing suggestions**: Considerable editing is needed to close gaps in content and solve cleanup problems.
Start	**Start article** **Reader's experience**: Provides some meaningful content, but most readers will need more. **Editing suggestions**: Providing references to reliable sources should come first; the article also needs substantial improvement in content and organisation.
Stub	**Stub article** **Reader's experience**: Provides very little meaningful content; may be little more than a dictionary definition. **Editing suggestions**: Any editing or additional material can be helpful. The provision of meaningful content should be a priority.

3.5 General popularity of climate change content on Wikipedia

With the Australian bushfires and youth protests capturing news headlines around the world in 2019, the Wikipedia articles related to climate change saw an 80% increase in views, from around 5.5 million in January 2019 to nearly 9.5 million in January 2020.[29, 30] The COVID-19 pandemic disrupted this general upward trend in 2020, as there was less interest in climate change topics in the English speaking world, dropping to 7.4 million pageviews from March 27-April 27 2020. Despite this, the general increased interest in climate change issues worldwide indicates that it is more important than ever to make sure climate-related articles are presenting the most up-to-date, relevant and accessible information.

FIGURE 4 Climate change articles by quality and importance, as of July 2020[31]

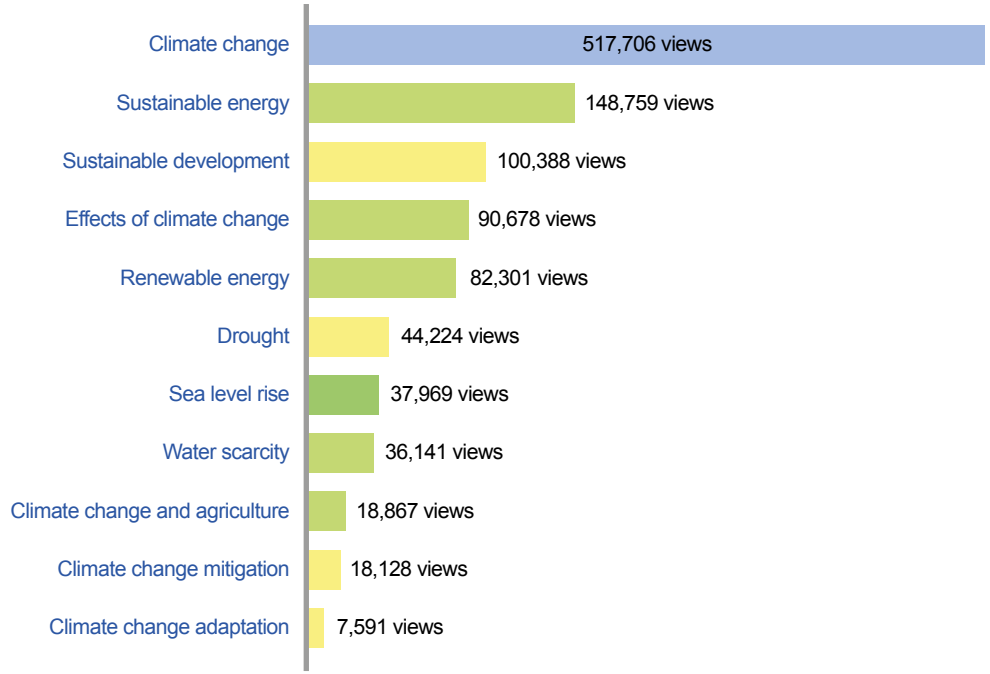
Quality	Importance						
	Top	High	Mid	Low	NA	???	Total
FA	1	1	2	1			5
GA		13	13	6			32
B	13	43	48	40		4	148
C	22	124	124	215	2	101	588
Start	7	88	154	315	10	343	917
Stub		8	42	150	11	243	454
List	1	7	8	5		6	27
NA	3		1		160		164
Assessed	47	284	392	732	183	697	2,335
Unassessed				1		4	5
Total	47	284	392	733	183	701	2,340

FIGURE 5 WikiProject Climate Change's 'hot articles', on 6 February 2020[32]

The WikiProject Climate Change also identifies '**hot articles**' which have been substantially edited in a seven-day period. For example, in the week of 3 February, the Australian bush fires and Greta Thunberg were at the top of the hotlist (see **Figure 5** above).

Figure 6 outlines the popularity of a selection of important climate change topics on Wikipedia in terms of average monthly pageviews, as well as their quality ratings. In August 2020, the Wikipedia community decided to merge the Global warming and Climate change articles and add a redirect so all visitors are now taken to the Climate change article.[33] This means that the Climate change article pageviews for 2019 below also include the pageviews from the Global warming article.

FIGURE 6 Average monthly pageviews for a selection of important climate change topics on Wikipedia from January to December 2019



Note: *The colours of the bars correspond with article quality (see* ***Table 2****).*

Participants at an edit-a-thon in Egypt focusing on women's health (*UN Women/Emad Karim via **Flickr***)

Finding article page views

You can use Wikipedia's pageview statistics tool to find out the popularity of particular articles. The tool allows you to see how many people have viewed an article in a given time period. Go to the article you are interested in, click on 'page information' under 'tools' in the left sidebar. Then click on 'pageview statistics' right at the bottom of the 'page information' menu.

You can also go directly to Wikipedia's pageview analysis tool here:

https://pageviews.toolforge.org

Find the most popular climate change-related articles here:

https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Climate_change/Popular_articles

[4] How to edit Wikipedia

This section will take you through the editing process, including how to create a username, add a citation, make an edit and create a new article. In addition, it will provide insight into the editing principles, style and tone of Wikipedia, and how to edit in languages other than English. It also outlines important considerations for researchers in editing Wikipedia.

There is a lot of material on Wikipedia already and the purpose is not just to reproduce it here. We draw attention to the most important things to consider when editing and how to get you started. But we do encourage you to read more in your own time using the links signposted by the further resources icon, as Wikipedia guidance and protocols may change or be updated over time.

4.1 Important considerations for researchers

Effective communication is based on knowing the audience and framing and presenting the information accordingly (for more information on this, see **Communicating Climate Change: A Practitioner's Guide**[34]). For researchers, communicating scientific findings in written format is not new. Postgraduate degrees are awarded on the basis of dissertations or theses, and publishing papers in journals to document results is a key component of recognition and career progression. But the audience for this writing is largely peers in academia and the scientific community, and the style is very specific.

Can you cite your own research?

Wikipedia cautions expert editors to avoid conflicts of interest, which is another mechanism to ensure the reliability of Wikipedia content. Wikipedia's **Conflict of interest policy**[35] does allow you to cite your own research and publications in articles. However, you need to ensure the article maintains a neutral point of view (see Style and Tone in **section 4.3**) and your material has to have been published in a reliable outlet by a third party.[36]

In keeping with Wikipedia's encyclopedia-like entries, you should also ensure that your work is cited in the context of the broad issues within the topic. If you might have a conflict of interest it is good practice to disclose it on the article's **Talk page** to allow other editors to provide some verification (read more about Talk pages in **section 4.7**).

Wikipedia's audience, and the aims of its articles, are different from scientific papers. It is, therefore, not automatically easy for researchers to contribute content and articles to Wikipedia, as they have to master writing in a different style for a different audience. Having spent many years honing skills in scientific writing, and often researching a niche area within the broad climate change field, it takes practice to write in an accessible style that gives an overview of a topic to an interested non-specialist.

4.2 Five principles to guide Wikipedia editors

FIGURE 7 Wikipedia's 'five pillars' to guide Wikipedia editors[37]

1. Wikipedia is an encyclopedia (not a dictionary, newspaper or an advertising platform).
2. Wikipedia is written from a neutral point of view (avoiding advocacy and opinions).
3. Wikipedia is free content that anyone can use, edit, and distribute (no editor owns an article and any contributions can be edited and redistributed).
4. Wikipedia's editors should treat each other with respect and civility (seek consensus, avoid edit wars, and act in good faith).
5. Wikipedia has no firm rules (Wikipedia has policies and guidelines that evolve over time, but the principles are more important).

Wikipedia tutorial on the style and content of Wikipedia articles:
https://en.wikipedia.org/wiki/Wikipedia:Manual_of_Style/Contents
Wikipedia editing for scholars, researchers and academics:
https://en.wikipedia.org/wiki/Help:Wikipedia_editing_for_researchers,_scholars,_and_academics

4.3 Style and tone

As with other encyclopedias, information should be added to Wikipedia in a straightforward, 'just-the-facts' style.[38] As mentioned in the five principles, it is important to write from a neutral point of view, avoiding writing in the style of an essay or opinion piece, or in any way that shows bias.[39] This can be achieved by reading broadly around a topic and including all views that can be backed up by verifiable sources, without promoting one view over another. Avoid stating opinions as facts by attributing the statement to the source in the article.

Examples of style and tone

An example of a non-neutral point of view would be: "*If the world doesn't take action now, human civilisation is in great peril*," because it expresses an opinion.

The same example written in a neutral point of view would be: "*The scientific consensus is that human society needs to take action now or risk great consequences*," because it attributes the statement to a well-established authority.

Consider the audience you are writing for. Most of the time, it will be the general public, but certain topics will attract more knowledgeable readers.[40] Therefore, rather than 'dumbing down' technical concepts or topics, make the content more understandable by avoiding technical language when it is not necessary, expanding acronyms and providing sufficient background and context.[41] Links can be used to point readers in the direction of further relevant information, whether on other Wikipedia pages, or elsewhere. Finally, consider the scope of the article you are adding to and only contribute information that is relevant to the readers of that article.

A farmer planting a banana tree (*Panumas via **Adobe Stock***)

Weather information and water availability is communicated to community members in Maharashtra, India (*Tali Hoffman, ASSAR*)

Consider writing for 'one level down' from the typical level at which the topic is studied. For example, if the topic is usually introduced at university level, write it in a language that a high-school student can understand. If it is a topic normally introduced later in high school, then write it so a 12-year-old can understand.[42]

How to make technical articles understandable

https://en.wikipedia.org/wiki/Wikipedia:Make_technical_articles_understandable

EXAMPLE 1: Translating scientific language into plain language suitable for Wikipedia articles

The first two sentences of the abstract of Howard, E., Washington, R. and Hodges, K.I. (2019) Tropical Lows in Southern Africa: Tracks, Rainfall Contributions, and the Role of ENSO, JGR: ***Atmospheres*** 124(21) 11009-11032 reads, "Southern African tropical lows are synoptic-scale cyclonic vortices that propagate westward across southern Africa in the Austral summer. They strongly influence local rainfall and aggregate in the climatological December, January, and February mean to form the Angola Low."

This could be explained in the Wikipedia article on 'Tropical Lows' as "*Tropical lows are storms that are a bit like very weak tropical cyclones. They occur in summer in tropical regions.*" (Extracted from the plain language summary provided alongside the original journal article). *In southern Africa, tropical lows typically form on the western side of the continent (known as the Angola Low), where they affect summer rainfall patterns.*

Note: This example demonstrates that when translating scientific findings it is not necessary to summarise the whole abstract or whole sentences, but rather distil what is relevant for particular articles. In this example, only information relevant to a page on tropical lows was extracted.

EXAMPLE 2: Translating scientific language into plain language suitable for Wikipedia articles

The abstract of Bhave, A.G., Bulcock, L., Dessai, S., Conway, D., Jewitt, G., Dougill, A.J., Kolusu, S.R. and Mkwambisi, D. (2020) Lake Malawi's threshold behaviour: A stakeholder-informed model to simulate sensitivity to climate change. ***Journal of Hydrology*** *584*, 124671 reads:

"Over 90% of Malawi's electricity generation and irrigation depend on Lake Malawi outflows into the Shire River. Recent lake level declines have raised concerns over future climate change impacts, including the risk of no outflows if the Lake Malawi Outflow Threshold (LMOT) is passed. Addressing calls for model co-production, we iteratively engage stakeholders in data collection, and eliciting local system insights and management priorities, to inform the development of a Water Evaluation and Planning (WEAP) model for the Lake Malawi Shire River Basin. We use a simple model setup and manual calibration to allow for data sparsity and limited documentation of historical management decisions. The model satisfactorily captures limited observed streamflow patterns of Lake Malawi tributaries and lake level variations for the period 1960–2009, however, small errors in lake level simulation significantly affect simulation of monthly outflows. The riparian countries, Malawi, Tanzania and Mozambique contribute approximately 55%, 41% and 4% respectively to lake inflows (1960–2009 average). Forced with 29 bias-corrected global climate model projections (2021–2050) and assuming no change in current operating rules of key infrastructure, the WEAP model simulates wide-ranging changes. These include much higher lake levels that would cause downstream floods, and much lower lake levels, including 11 projections that fall below the LMOT. Both outcomes would have major implications for downstream hydropower and irrigation. Future water management plans require identification and evaluation of strategies that can address multi-year shifts in lake levels and the uncertainty inherent in future climate and hydrological model outputs."

The key findings could be summarised in the article on '**Malawi**' under climate impacts as "*Future outflows from Lake Malawi into the Shire River under climate change may be higher, lower or similar to the current levels, based on a Water Evaluation and Planning (WEAP) model run with outputs from 29 bias-corrected global climate models. This has implications for hydropower planning*".

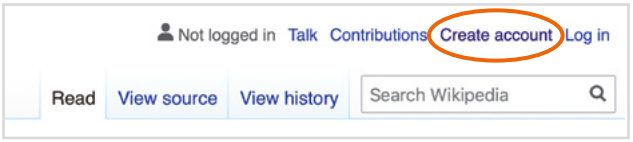
Note: In this example, information has been distilled for the general Malawi article, which includes many sections on the country's history, politics, and economy, amongst others. This abstract, therefore, needs to be summarised into only one or two sentences which are relevant to a section on climate impacts.

4.4 How to create a username

It is free to create a Wikipedia account, and you do not need to provide any personal details.

STEP 1

Go to Wikipedia and click '**Create account**' in the top right corner of the page.



Enter a username and password. An e-mail address is optional, but is useful to recover your account if you forget your username and password.

Choosing a username[43]

- Put some thought into your username, as it cannot easily be changed and it will identify all your contributions to Wikipedia.
- Do not choose a name which may be offensive or misleading (e.g. a username that impersonates another person).
- The username should represent you as an individual, not a group or an organisation.
- Think carefully before creating an account using your real name as it could increase the potential for harassment, especially if you edit controversial topics.

Wikipedia's username policy

- **https://en.wikipedia.org/wiki/Wikipedia:Username_policy**

A farmer shows his yellow organic coffee fruits harvest in Coroico, Bolivia (*Alexandre via **Adobe Stock***)

4.5 How to add a citation

All information added to Wikipedia needs to be verifiable by **Reliable sources**[44], through citations. These sources do not only need to be academic, but can include websites, newspapers, books, etc., as long as they are from reliable published sources with a reputation for fact-checking and accuracy, such as well-established news outlets.

When adding information to Wikipedia, it is important not to copy and paste from these sources, but to write content in your own words. Quotations should be in quote marks, with a clear citation showing where the quote has come from.

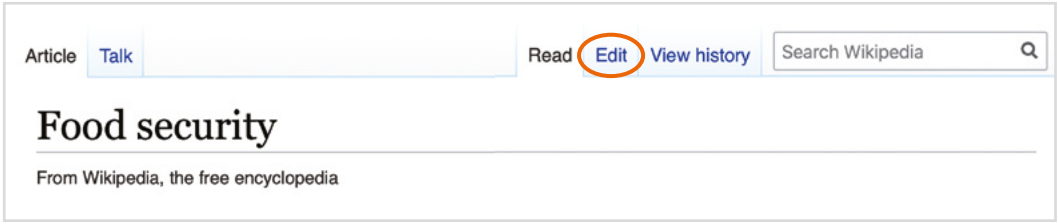
Reliable sources

https://en.wikipedia.org/wiki/Wikipedia:Reliable_sources

Verifiability

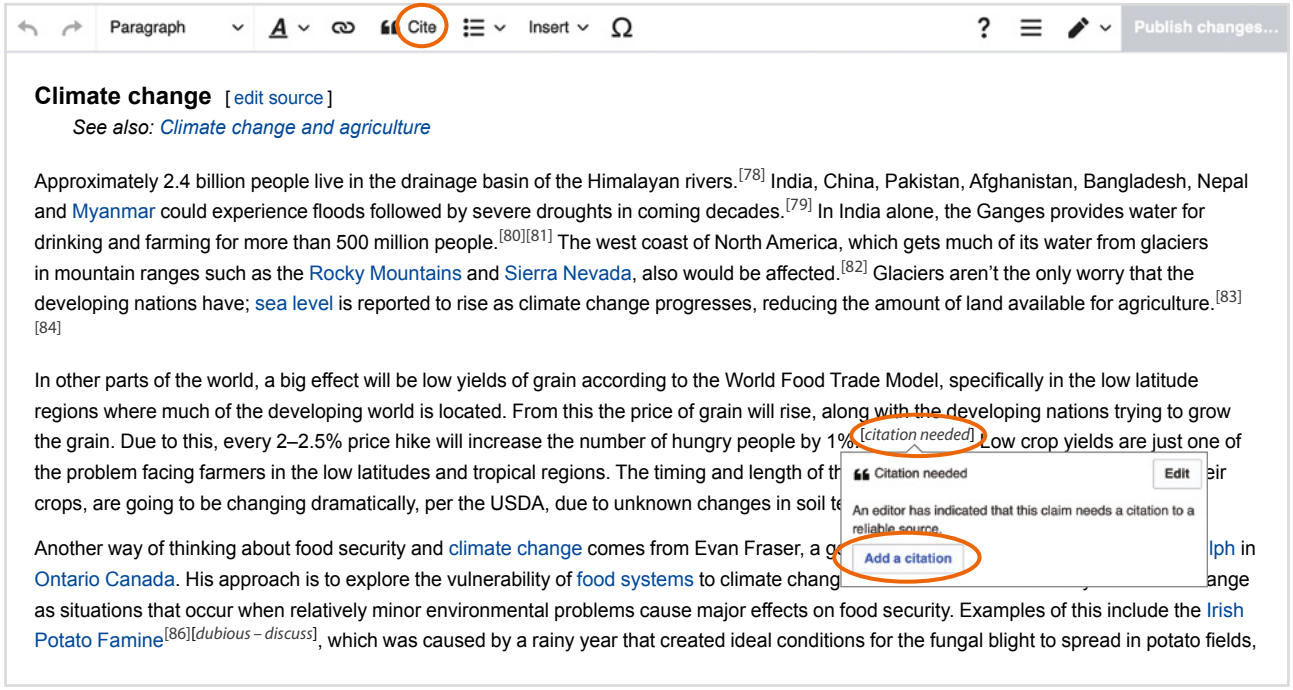
https://en.wikipedia.org/wiki/Wikipedia:Verifiability

STEP 1 Click '**Edit**' at the top right of the article or on a section heading to take you to the edit view.



STEP 2

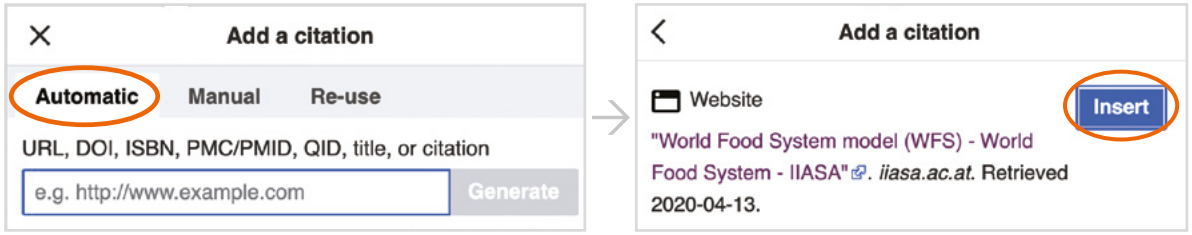
Put your cursor where you want to add the citation, and click '**Cite**' on the edit toolbar.
Or: If you are adding a citation where it says 'Citation needed', click on '**Citation needed**' and then '**Add a citation**'.



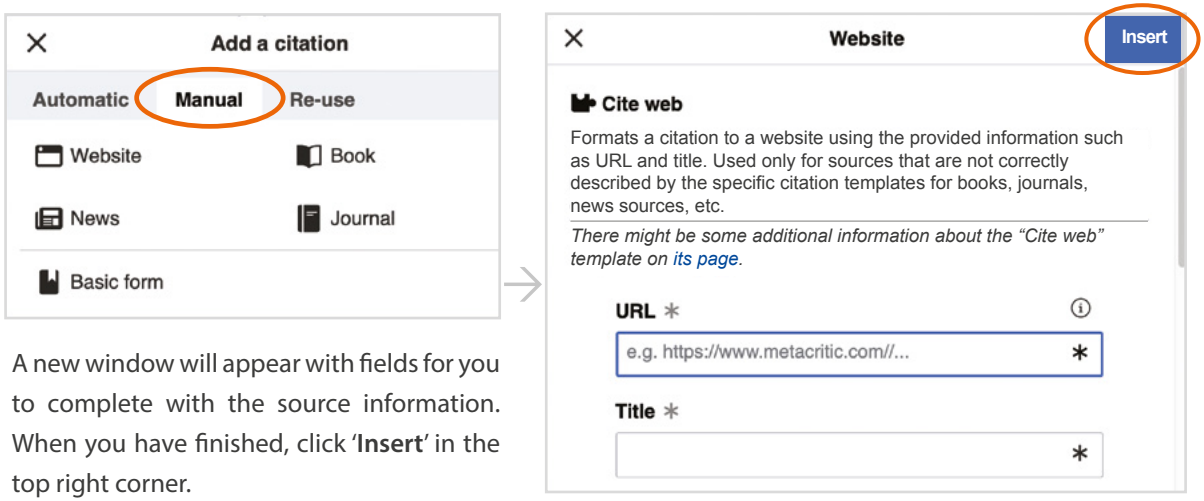
Solar energy generation in the Atacama Desert, northern Chile (*Abriendomundo via* ***iStock***)

STEP 3 Choose whether you want to add your citation automatically or manually. We recommend automatic as it is easier and more efficient.

STEP 3a To add an automatic citation, paste the link to the source and Wikipedia will generate the reference details for you. Click '**Insert**' to add the citation to the article.



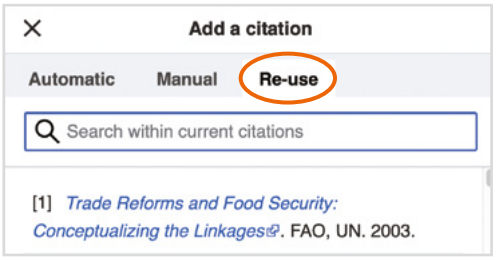
STEP 3b To add the citation details yourself, choose the manual option and click on the source type.



A new window will appear with fields for you to complete with the source information. When you have finished, click '**Insert**' in the top right corner.

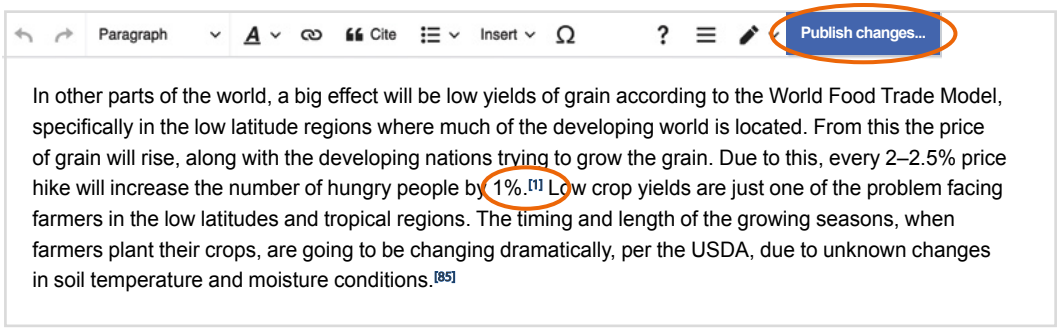
STEP 4

To use the same citation more than once in the same article, click '**Re-use**' and choose the one you want to insert from the list, or use the search functionality to find it.



STEP 5

When you have finished editing, click '**Publish changes**' in the top right corner of the article to add your citation to the live site.



Practise adding citations

Use the Citation Hunt tool[45] to practise adding citations to articles. Either use the random results generated by Wikipedia or use the search functionality to filter results to a specific topic or area of interest.

Citing sources

- **https://en.wikipedia.org/wiki/Wikipedia:Citing_sources**

4.6 How to make an edit

STEP 1 Go to the article you want to edit and click '**Edit**' on the top right next to 'Read'. You can choose to use either Source Editor (**Wikitext**) or **Visual Editor** mode, and you can toggle between the two using the pencil icon on the right-hand side of the page. Visual Editor is the easiest method, as it displays the text in the same way as it will look once it is published (see Figure 8a and 8b).

Wikipedia's user guide for using the Visual Editor

https://en.wikipedia.org/wiki/Wikipedia:VisualEditor/User_guide

FIGURE 8a Visual editor mode for the Climate change adaptation article[46]

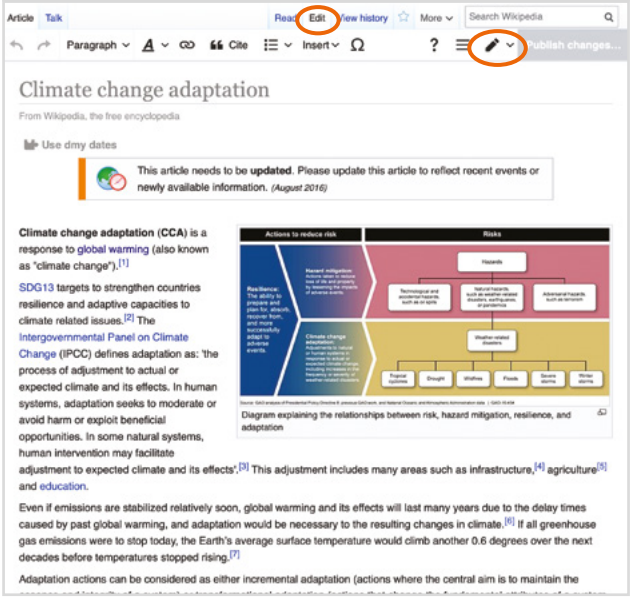
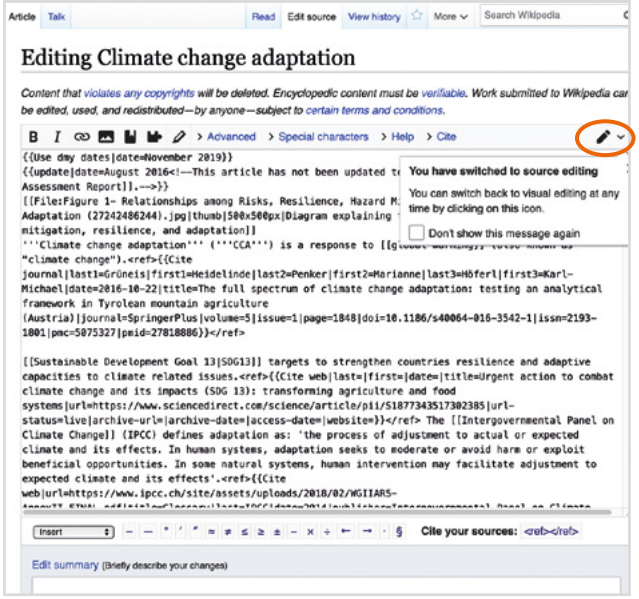


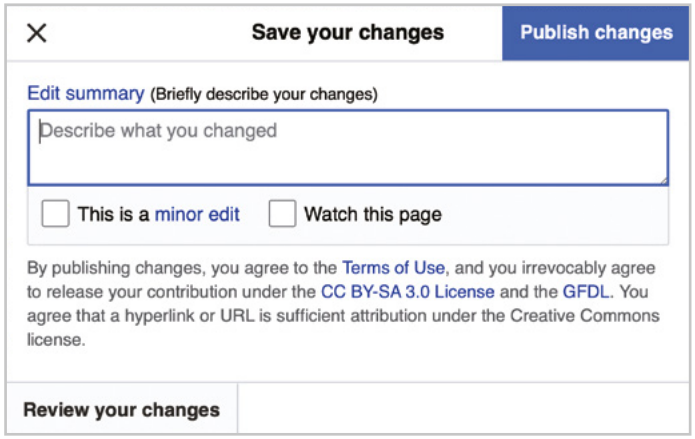
FIGURE 8b Source editor (Wikitext) mode for the Climate change adaptation article[46]



STEP 2

To make an edit, either write over the existing text or add your new text directly onto the page. When you are finished, click '**Publish changes**' and it will ask you to provide an edit summary of your changes.

If you have only corrected spelling or formatting, and not added (or removed) anything substantial, you can check the box 'This is a minor edit'.[47] If you are making a significant edit, make sure to describe it accordingly.



When in doubt about whether your edit is major or minor, it is better to treat it as major, as other editors may not be alerted to minor edits.

Examples of edit summaries on the Climate change adaptation article:

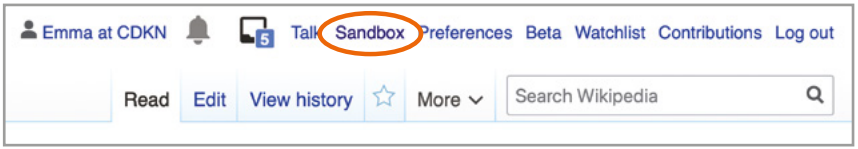
"Created a new section on adaptation policies and moved relevant information there from other sections."

"Updated the opening definition of adaptation to reflect the IPCC's latest definition (taken from its glossary of terms). The previous definition was vague and did not cover all aspects of adaptation. I've also added a reference to the distinctions between incremental and transformative adaptation."

STEP 3 Check the box '**Watch this page**' to be alerted on Wikipedia when others make edits to the article or its Talk page.

STEP 4 Click '**Review your changes**' to double-check how your edit will look on the page. Then, when you are ready to go live, click '**Publish changes**'. Your edit will be immediately published online.

Practice editing in your own **Sandbox** before directly editing a Wikipedia page. Every Wikipedia account comes with a Sandbox, which is a space to use to practise editing or drafting an article. You can find the link in the menu on the top right of every page (when you are logged in).



For more information, see: **https://en.wikipedia.org/wiki/Help:My_sandbox**

- **Watchlists: https://en.wikipedia.org/wiki/Help:Watchlist**
- **How to edit: https://en.wikipedia.org/wiki/Help:Editing**
- **Wikimedia Foundation guide on how to edit Wikipedia: https://upload.wikimedia.org/wikipedia/commons/1/18/Editing_Wikipedia_brochure_EN.pdf**
- **Edit conflicts: https://meta.wikimedia.org/wiki/Help:Edit_conflict**

Researchers edit the Wikipedia article on the impact of climate change on agriculture in Africa at the Africa climate change edit-a-thon, August 2019 (*CDKN & FCFA*)

Avoiding edit conflicts

If two people edit the same article at the same time, an edit conflict may occur, where the first edit to be published will be saved and the other one overridden. If this happens, it is best to copy your changes, reload the page, and then add those changes back into the refreshed article.

What to do if your edit is reverted

Once your edit has been published, other editors watching the page will get a notification and may decide to review your changes. All editors have the ability to revert your edits if they believe them to be contravening the Wikipedia policies and guidelines (e.g. if you add biased or promotional material, etc.).[48] When an edit is reverted, you will receive an alert on Wikipedia and a notification via e-mail, with an explanation from the editor who made the revert. If you disagree with a decision to revert an edit, you can post a message on the article's Talk page and discuss the issue with other editors (see **section 4.7**). Remember, as an editor, you play a role in quality control so try and review others' edits as well.

Wikipedia Asian Month edit-a-thon in Kerala, India, November 2019 (*Ranjithsiji via **Wikicommons***)

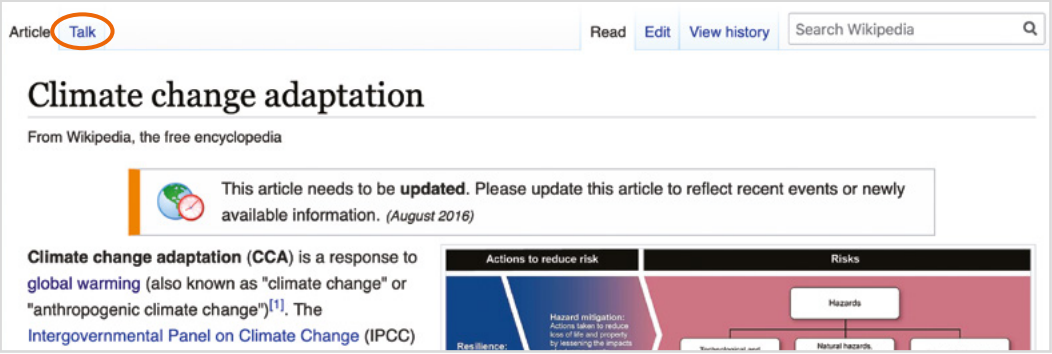
> **It is easy to be a Wikipedia editor and something that can take as little or as much time as anyone has available, i.e. there's no excuse not to contribute!**
>
> *South African participant, Africa climate change edit-a-thon, August 2019*

Be aware that other editors who are not subject experts may revert your edit. Do not try to re-submit a previous edit that has been reversed, rather engage with the editor on the Talk page.[49] If the reason for the revert was straightforward (e.g. added promotional links such as social media accounts), you can make the required changes and submit your revised edit, without posting on the Talk page.

4.7 How to use the Talk page

In addition to resolving editing reverts, the Talk page can also be used as a means of testing an idea, or asking a question before you edit an article directly. Other editors interested in improving the page can see your comment and respond accordingly. Each Wikipedia account also comes with a Talk page that other editors can use to leave you a message. Follow the steps below to learn how to contribute to article Talk pages.

STEP 1 To navigate to an article's Talk page, click '**Talk**' on the left hand menu next to the '**Article**' tab.



STEP 2 Read the Talk page to check whether the topic you want to raise has already been addressed by another editor.

There is no Visual Editor on Talk pages, so you will need to use **Wikitext** (see **Figure 8b**).

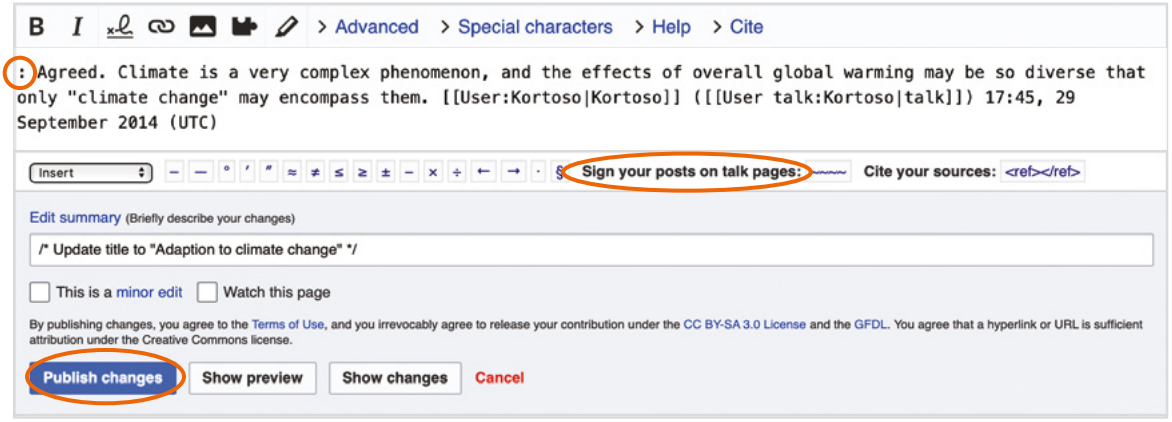
Talk pages

https://en.wikipedia.org/wiki/Help:Talk_pages

STEP 3 If the topic has been addressed by another editor and you want to add to the conversation, click '**Edit source**' on the top right menu, or '**Edit**' next to the section you want to contribute to. *(If not, go to Step 6.)*

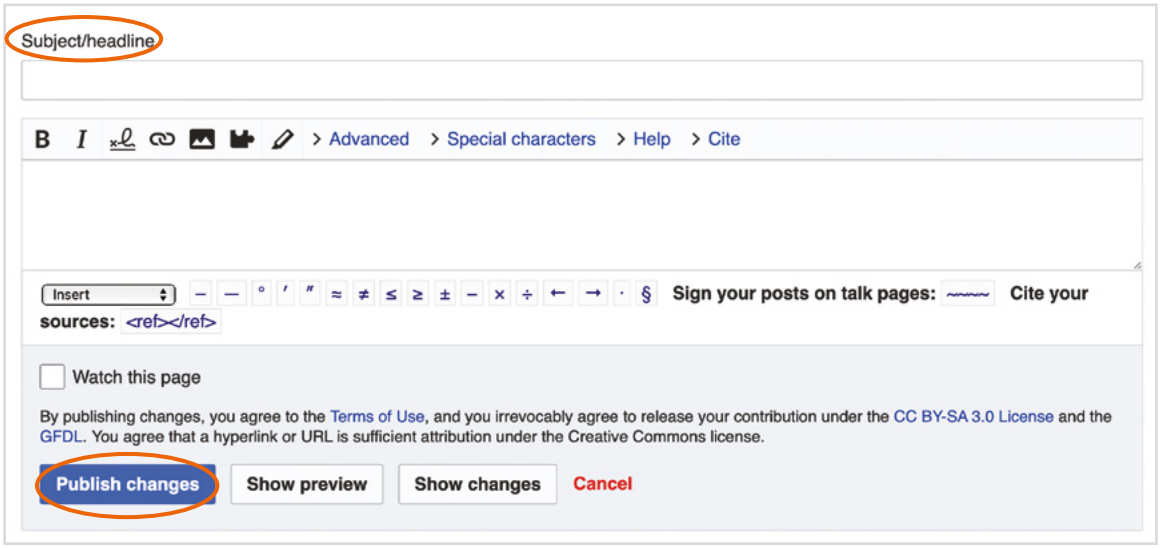
STEP 4 Add your comment under the last discussion point, making sure to indent your reply by putting a colon (:) at the beginning of your sentence (see screenshot below).

STEP 5 Always sign off your post by typing the tilde four times (~~~~), which automatically adds your username and a timestamp to your post. There is also a button you can click to add these automatically. Then click '**Publish changes**' when you are ready to post your comment.



STEP 6 If you are posting about a new topic that does not fit under any of the other section headings, click '**New section**' on the top right menu.

STEP 7 Add a subject/headline, type your post and then sign off using the four tildes (*see Step 5*). Click '**Publish changes**' when you are ready for your post to go live.



4.8 How to create an article

Before trying to create a new article, it is advisable to wait until you are comfortable with editing and have built up a good reputation among other Wikipedia editors. Knowing the Wikipedia conventions and successfully mastering the editing tools are essential for creating a successful article from scratch.

Before you start, first check that the article does not already exist, or that the topic would not be better suited as a sub-section of another article. Consider whether the topic is **notable** enough for its own article, i.e. has it been widely written about by a number of reliable sources? If you are not sure if the topic is notable, ask other editors for their advice in the **Teahouse**. The Teahouse is a place for "new editors to become accustomed to Wikipedia culture, ask questions, and develop community friendships."[50]

Once you are satisfied that you have enough material for an article on a notable topic, follow the steps below to create your article.

STEP 1 Use the **Article Wizard** or your own **Sandbox**. The Article Wizard takes you through the process step-by-step, and has a link to a live chat that you can use to ask a volunteer editor a question in real-time.[51]

STEP 2 When you have finished drafting your article, submit it for review on the Article Wizard, or if it is in your Sandbox, post a message in the Teahouse requesting feedback from other editors. The reviewer will either provide feedback on how it could be improved, or move it straight to the main article space.

STEP 3 Once your article has been approved, make sure to **draw attention** to it by linking to it from other relevant articles[52]. Also make sure that your article is included in at least one appropriate **Category**[53].

For help with choosing an article title, writing a good introduction and structuring your article, visit:

https://en.wikipedia.org/wiki/Wikipedia:Writing_better_articles

Get help with your first article:

https://en.wikipedia.org/wiki/Help:Your_first_article

4.9 Editing in other languages

As highlighted in **section 2.3**, there are currently 302 active different language Wikipedias, including English[54], and even more can be created if there are editors willing to start them. You can use the same username and password to edit other language Wikipedias in the same way you would edit the English version. To navigate to the other Wikipedias, go to **www.wikipedia.org** and click on a language.

If you are already on an English Wikipedia article, and want to see if a translation exists, navigate to the languages section at the bottom of the left-hand side bar. If there is no link in your language, then it suggests the article does not yet exist in that language[55].

To add a translated version of an English Wikipedia article, see:
https://en.wikipedia.org/wiki/Wikipedia:Translate_us

Women participating in a Wikipedia workshop on editing in Wayuunaiki, a language spoken by the ethnic Wayuu people in Colombia, 2019 (*Mpbonillap via **Wikicommons***)

> **It's true that Wikipedia is multilingual, but we as francophones also need to find enough information in French. And for us to accomplish this, as researchers we must be able to put information onto French Wikipedia.**
>
> *Translation from French-speaking Senegalese participant, Africa climate change edit-a-thon, August 2019*

[5] Getting involved with the Wikipedia climate change community

Editing Wikipedia can often feel like an isolated task but there are many editors, part of the large Wikipedia climate community, who are always on hand to offer advice, provide a network, or to collaborate – you just have to get involved!

Join a WikiProject

There are a number of WikiProjects that relate to climate change and environmental topics that you could join, such as the **WikiProject Climate Change**. For researchers aiming to increase the coverage of content from academic journals and other scholarly publications, consider joining the **WikiProject Academic Journals** (see **section 3.3** on WikiProjects).

WikiProjects will often consist of sub-groups or task forces, which are usually related to a niche geographic area or topic that is part of a bigger WikiProject (such as the **Climate Change Africa task force**).

Interact with fellow editors

In addition to article Talk pages (see **section 4.7**), each user has their own Talk page where editors can leave messages for each other. Editors can also engage with one another through the **Teahouse**.

Indian Wikimedians at the Wikigraphists Bootcamp, September 2018 (*Satdeep Gill via **Wikicommons***)

Novice editors have the option of joining the **Wikipedia adopt-a-user programme**. This programme is designed to help new and inexperienced users by pairing them with more experienced Wikipedia editors. These editors (referred to as adopters or mentors) will 'adopt' newer users, guiding them along the way as they learn about Wikipedia and its various aspects.

Join or plan a climate change edit-a-thon or meet-up (virtual or in-person)

Once you have become familiar with fellow climate editors in the same topic area it may be a good idea to plan an edit-a-thon (see **section 6**). Alternatively, you can plan or join a **Wikimedia meet-up**, where editors can socialise and discuss WikiProjects or any other Wikipedia-related topics either in person or online.

Share your Wikipedia editing skills with fellow researchers

To grow the Wikipedia climate community, share the culture of Wikipedia and your skills with fellow climate researchers and practitioners in your network. This will help to create a growing collective of active and engaged climate editors.

Art+Feminism edit-a-thon in Lima, Peru to add content about female artists to Wikipedia, March 2015 (*Arandana17 via **Wikicommons***)

[6] Hosting your own Wikipedia edit-a-thon

Now that you have built up your editing skills and become an active member of the Wikipedia editor community, you may want to share your newfound knowledge, and host your own edit-a-thon.

In this section we draw on our experience of organising an **edit-a-thon** and provide a step-by-step guide to help you with planning your own.

> **I think there are many advantages to having a dedicated event to learn how to edit Wikipedia. First of all it puts you far away from your work, and gives you the time to learn from the Wikipedia editors guiding us through the process.**
>
> *Kenyan participant, Africa climate change edit-a-thon, August 2019*

What is an edit-a-thon?

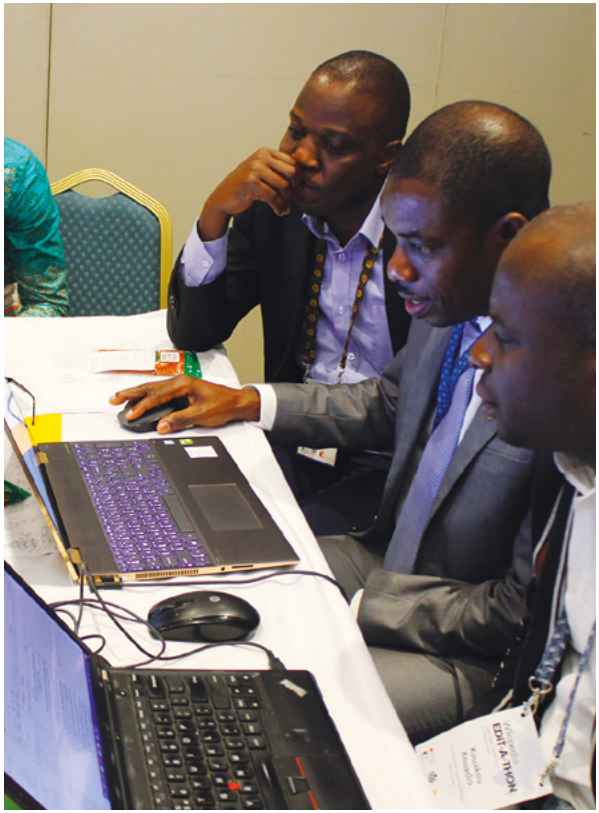
An **edit-a-thon** is an organised event where Wikipedia editors improve a specific topic. The event typically includes editing training by experienced Wikipedia editors. Edit-a-thons can be informal or structured; and can be designed primarily as outreach events (to draw in new contributors) or as meet-ups for longtime contributors[56]. They can be in person, virtual or a mix of both.

Conduct research to see whether other climate change-related edit-a-thons have taken place before in your topic area, as the organisers may have some useful tips and learning to share.

Preparing for the edit-a-thon

STEP 1 Clearly define and design your edit-a-thon

An important first step is to brainstorm and conceptualise your edit-a-thon, including clearly defining your focus area, identifying participants and deciding on your objective. It is also important to determine whether it will work better as an in-person or virtual event, or a mix of both.



Climate scientists work on the **Climate change in Africa** article at the Africa climate change edit-a-thon, August 2019 (*CDKN & FCFA*)

Bring in a Wikipedia expert to give technical advice to your workshop participants. Make sure they are thoroughly briefed and have a good understanding of the edit-a-thon's objective.

OUR EXPERIENCE: The aim of our edit-a-thon was to introduce Wikipedia to African climate researchers and practitioners, and provide an opportunity for them to share their climate research on the platform. It was a three-day in-person event that drew on the collaborative knowledge of all participants, through group editing, and benefitted from in-person guidance from Wikipedia experts. This allowed the edit-a-thon to run more smoothly and be more impactful, with faster troubleshooting response times and collaborative opportunities to tackle bigger edits. We had initially discussed also having a virtual event. However, since climate change is a complex topic and most participants were first-time editors, we decided it would be more effective for our event to be in-person.

STEP 2 Involve a local Wikipedia expert (if possible) or someone who has prior knowledge of editing Wikipedia

Make sure to involve a local Wikipedia expert, or someone who has edited Wikipedia before, to provide advice. Your first port of call can be joining **WikiProject Climate Change** and sharing your edit-a-thon on the Talk page to find out if there are any editors willing to offer advice or connect you with other local Wikipedia editors. Alternatively, you can also reach out to your local Wikimedia chapter for assistance (see map of Wikimedia chapters in **section 2.1**). During the edit-a-thon, it is advisable for these Wikipedia experts to be present to introduce how to edit and provide one-on-one guidance to individual participants.

STEP 3 Target the right participants

Promote and disseminate your edit-a-thon across multiple channels, including social media, mailing lists, and your networks to ensure you target the appropriate participants. Create a form where potential participants can register and provide more details about themselves and their work to ensure their expertise aligns with the edit-a-thon topic area.

STEP 4 Finalise the practical logistics

If conducting your event in-person, find a venue that fits the requirements of an edit-a-thon. Most importantly this includes a fast, reliable internet connection that can cope with the expected number of participants. The room should be large enough to seat all your participants comfortably, as they will be working at their laptops for many hours. Break-out rooms (or a large main room) are also helpful if participants form editing groups for specific topics and articles.

If conducting a virtual event, ensure that you have a reliable internet connection, take into account time differences, and use an online platform to communicate and coordinate with fellow editors easily (especially to prevent any editing conflicts that could arise on the same pages).

STEP 5 Notify the online Wikipedia community of your edit-a-thon

Notify the wider Wikipedia community of your event by posting it on the relevant WikiProject Talk page. It is helpful to let other editors know in case they want to be involved virtually, in a support capacity. It also prepares editors who may be watching specific pages to expect a large number of edits in a short time period, mostly from first-time editors who may accidentally contravene some of the Wikipedia guidelines.

Volunteers editing Wikipedia articles about the Sustainable Development Goals during the Arab Sustainable Development Week in Cairo, November 2019 (*UN Women/Emad Karim, **Flickr***)

STEP 6 Have a broad understanding of the relevant Wikipedia articles

Have a general idea of what existing content related to your topic area is available on Wikipedia. If you have time, this can also include investigating the class (quality) and importance ranking (for example by the WikiProject Climate Change) and pageviews for specific pages. This is helpful to differentiate between high-impact pages with a high number of views and those that need improvement. Also, ensure your participants are familiar with the Wikipedia articles in their subject area, either by providing them with a selection of articles, or encouraging them to search for keywords of interest to them.

STEP 7 Provide guidance materials to participants in advance

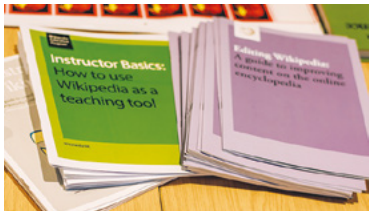
For many participants, this will be the first edit-a-thon they attend and they will likely have a number of questions on how the editing process works. There are a large number of resources on Wikipedia language, style and tone that could be shared with participants beforehand. However, it is important not to overload participants (in an already intimidating process) and instead share one or two key resources with them, such as this guide!

OUR EXPERIENCE: Whilst we shared resources with participants before the event, it was still useful to recap these briefly during the introduction session on the first day.

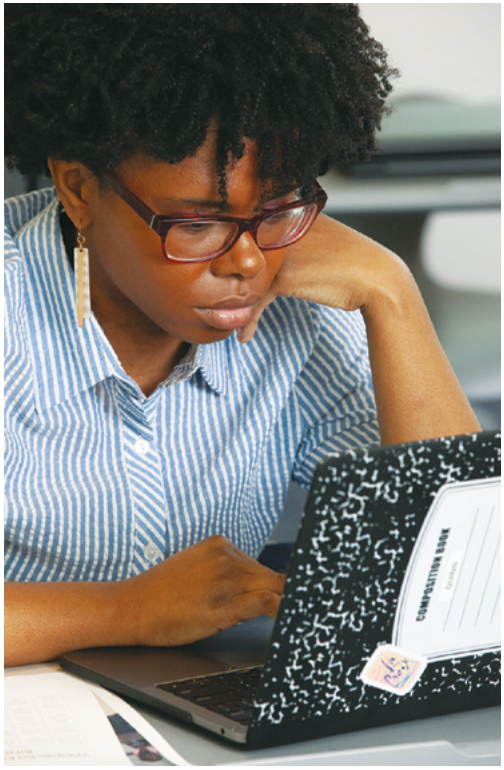
STEP 8 Ensure all participants create user accounts before the event

Send instructions to all participants to create a Wikipedia user account in advance, as there are restrictions on how many logins can be created using the same IP address.

Before the edit-a-thon, ask participants (for example, through a questionnaire) what specific content they would like to add to Wikipedia and which articles they would like to edit. This will help significantly with the planning.



Material displayed at University of Edinburgh edit-a-thon, 2016 (*Mihaela Bodlovic via **Wikicommons***)



A student participates in the Art+Feminism Wikipedia edit-a-thon (adding content about female artists) in Ohio, USA, March 2019 (*Ohio University Libraries via **Flickr***)

There may be limitations to creating a Wikipedia user account due to a country restriction or an IP address being blocked.

During the edit-a-thon

STEP 9 Monitor impact

At the start of the edit-a-thon, the Wikipedia expert can set up a Wikipedia dashboard to track all edits made during and after the edit-a-thon, which will help monitor the edit-a-thon's impact.

OUR EXPERIENCE: Wikimedia South Africa set up a **dashboard** to track edits made by participants.

STEP 10 Start off with smaller edits

At the beginning of the edit-a-thon, focus on training participants on the basics of editing Wikipedia and conducting smaller, more manageable edits. This will help to build participants' confidence and editing skill before they tackle more substantial edits.

OUR EXPERIENCE: On the first day, Wikimedia South Africa trained participants on editing basics, including an exercise to add citations to unreferenced statements. Participants then made small edits to articles related to their research expertise, or articles that they had previously identified. Most of these edits were changes to wording or factual corrections. During this time the Wikipedia editors were on hand to assist people on an individual basis.

STEP 11 Encourage collaboration

If you are conducting an in-person edit-a-thon, this is a good opportunity to use the collective knowledge of all the participants to edit articles collaboratively, particularly for high-impact and more complex topics that require strategic input and restructuring. For group editing, it can be useful to have an appointed lead to help to coordinate inputs and facilitate discussion around article structure.

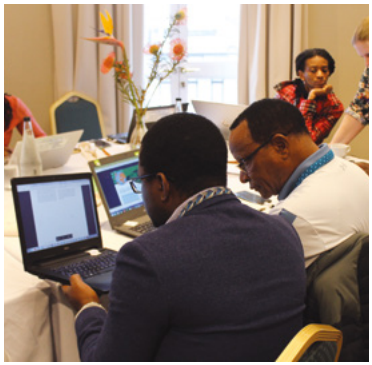
OUR EXPERIENCE: Once participants were comfortable with the editing basics, they were divided into four groups, each tackling a different article: Climate change adaptation; Climate change and agriculture; Climate change in Africa; and Drylands. Most had a facilitator to help with guiding the contributions. Participants did not have to stay in the same groups for the entire edit-a-thon, but the majority chose this option given the scale of the task. A few groups used Google docs to coordinate editing efforts and allow for peer input by fellow participants. Once the group was happy with the structure and content, the edits were transferred from Google docs to the Wikipedia article.

It is important to coordinate when there are two or more people editing the same article, as only one person can make edits to a Wikipedia article at a time (or an edit conflict will arise – see **section 4.6**). Participants may also want to make sure that their edits are attributed to their Wikipedia user accounts, so allow time for each user to input their edits.

Advice from Wikipedia on hosting an edit-a-thon:

https://meta.wikimedia.org/wiki/Training_modules/dashboard/editathon

> **When you are working on issues like climate change in Africa, agriculture, dry lands, these are big issues that individuals may not be able to do alone, but doing it collaboratively brings people's work that they've done in different regions together, and that enriches the page.**
>
> *Ghanaian participant, Africa climate change edit-a-thon, August 2019*



Climate researchers collaborate and edit the **Climate change adaptation** Wikipedia article at the Africa climate change edit-a-thon, August 2019 (*CDKN & FCFA*)

Group photo of the climate researchers and practitioners at the Africa climate change edit-a-thon, August 2019 (*CDKN & FCFA*)

STEP 12 Be flexible and adaptive

Allow participants to edit at a pace that suits them. Provide enough time for them to grasp the Wikipedia editing approach, especially as most will be first-time editors.

OUR EXPERIENCE: We had an expected plan of progress for each day. In the beginning, it was important to allow sufficient time for participants to conduct individual edits and then move on to group edits (if feasible). Working in groups took longer than estimated, as participants required time to agree on the strategy to tackle the article. We, therefore, adjusted the agenda and articles targeted for editing. We made the choice to focus on the quality of additions and strategically restructuring high-impact articles rather than adding small edits to many articles.

Make sure to have breaks in between editing sessions to give participants time away from their laptops. These can be in the form of short fun activities, which is also a good way for participants to get to know each other and to boost the energy and morale.

STEP 13 Reflect and take stock

Allow time for discussion, ideally at the end of each day, for participants to share and reflect on the editing process, take stock of the articles edited, and share any other comments or concerns. On the final day, participants can discuss and commit to articles they would like to edit after the edit-a-thon. This will help, in particular, with the virtual coordination of future group edits and in building the legacy of the edit-a-thon by growing a community of active editors.

OUR EXPERIENCE: Reflection sessions were valuable for our event. For example, in addition to documenting editing progress, on the first day we agreed on a set of principles for editing Wikipedia as a group, such as prioritising citations from African researchers, respecting diversity, and using language that is gender neutral. On the last day, participants committed to Wikipedia articles they would edit in the future and these were recorded on the **Climate Change in Africa task force** page created under the WikiProject Climate Change.

Enlist the help of a Wikipedia expert (if possible) to create a task force page if none exists for your topic area or geographical areas, as this will be useful to help participants coordinate edits going forward.

Don't forget to take photos to document your edit-a-thon, as these can be added to your Wikipedia meta page and uploaded to the Wikimedia Commons in 'Category:Wikimedia editathons' (or a sub-category of that).

> **"Encourage the participants to go home and edit and then you'll see immediate improvements in Wikipedia. The deep impact takes years to unfold; that is, establishing a culture amongst a network of people, in this case climate change experts, of contributing to Wikipedia and participating in the free knowledge movement...**
>
> *Douglas Scott, President of Wikimedia South Africa*

Participants created a future editing tree, adding the Wikipedia articles they would like to edit going forward (*CDKN & FCFA*)

Glossary

Article: A page on Wikipedia that contains information on a particular topic that can be edited.

Article Wizard: A tool that provides guidance and tips throughout the process of submitting a new article to Wikipedia.

Chapters: Independent non-profits representing the Wikimedia movement, focused within a specific geography e.g. Wikimedia South Africa Chapter.

Citation Hunt: A tool to practice adding citations to articles.

Edit-a-thon: Organised event where Wikipedia editors improve a specific topic, and new editors receive training from experienced Wikipedia editors.

Meta-wiki: A coordination platform for Wikipedia and other Wikimedia projects.

Notability: A test used by editors to decide whether a given topic warrants its own article.

Information on Wikipedia must be verifiable; if no reliable third-party sources can be found on a topic, then it should not have a separate article.

Sandbox: A user page to practice editing or to draft an article before adding it to the live site.

Source editor: A mode of editing Wikipedia that uses syntax and keywords (Wikitext).

Stub: An article that, although providing some useful information, lacks the breadth of coverage expected from an encyclopedia, and requires expansion.

Talk page: Administration pages where editors can discuss improvements to articles or other Wikipedia pages.

Teahouse: A space where you can engage with fellow editors and ask questions and get help with using Wikipedia.

Thematic organisations: Incorporated independent non-profits representing the Wikimedia movement and supporting work focused on a specific theme, topic, subject or issue within or across countries and regions.

User groups: Open membership groups with an established contact person and history of projects, designed to be easy to form.

Visual editor: A mode of editing Wikipedia that displays the text in the same way as it will look once it is published and does not require editors to learn or use Wikitext.

Wikimedia: The collective name for the Wikimedia movement, revolving around a group of interrelated Wikimedia Foundation projects, including Wikipedia, which aim to use the collaborative power of the internet to create and share free knowledge of all kinds.

Wikipedia: A multilingual online encyclopedia created and maintained as an open collaboration project by a community of volunteer editors using a Wiki-based editing system.

WikiProject: A group of participants established in order to achieve specific editing goals, or to achieve goals relating to a specific field of knowledge.

Wikitext: Also known as Wiki markup or Wikicode, Wikitext consists of the syntax and keywords used by the MediaWiki software to format a page.

African farmer tends to rice fields in Madagascar (*UN Photo, Lucien Rajaonin, via **Flickr***)

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About the contributors

Future Climate for Africa (FCFA) aims to generate fundamentally new climate science focused on Africa, and to ensure that this science has an impact on human development across the continent. Please visit: **www.futureclimateafrica.org**

The **Climate and Development Knowledge Network (CDKN)** works to enhance the quality of life for the poorest and most vulnerable to climate change. We support decision-makers in designing and delivering climate compatible development. Please visit: **www.cdkn.org**

SouthSouthNorth (SSN) is a South African NGO that supports national and regional responses to climate change in developing countries through policy and knowledge interventions, partnerships and deep collaboration. The Coordination, Capacity Development and Knowledge Exchange (CCKE) unit of FCFA and the global coordination of CDKN are both led by SSN. Please visit: **www.southsouthnorth.org**

Kulima Integrated Development Solutions is a South African boundary organisation that works to build partnerships and enable communication between scientists and various user groups to support effective and equitable adaptation to climate change. Please visit: **www.kulima.com**

Fishing in Peru (*SPDA*)

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