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The Web2forDev story: towards a community of practice

by ANJA BARTH and GIACOMO RAMBALDI

Introduction

Coined in 2004, the term Web 2.0 is often used to describe the emergence of free or low cost web tools and applications that enhance the way we create and publish information or collaborate and share resources online.[1] However, the Web2forDev 2007 conference was the first international event focusing specifically on how Web 2.0 could be used to the advantage of Southern development actors, operating in the sectors of agriculture, rural development and natural resource management.[2]

This article recounts the development of the Web2forDev community, which led to the successful conference in 2007 **Web2forDev: Participatory Web for Development**. The community coalesced from likeminded development organisations keen to harness the increased collaborative power promised by the new low cost technologies and applications.

Web2forDev 2007 went far beyond solely organising a conference. Many online collaborative spaces were created and activated beforehand. Therefore the Web2forDev story is more than just one event. It is the story of a steep learning curve faced by collaborating organisations in dealing with innovative technologies within diverse institutions.

[1] For a definition of Web 2.0, see glossary, p.123 (this issue).
[2] The acronym Web2forDev was only publicly introduced in March 2007.

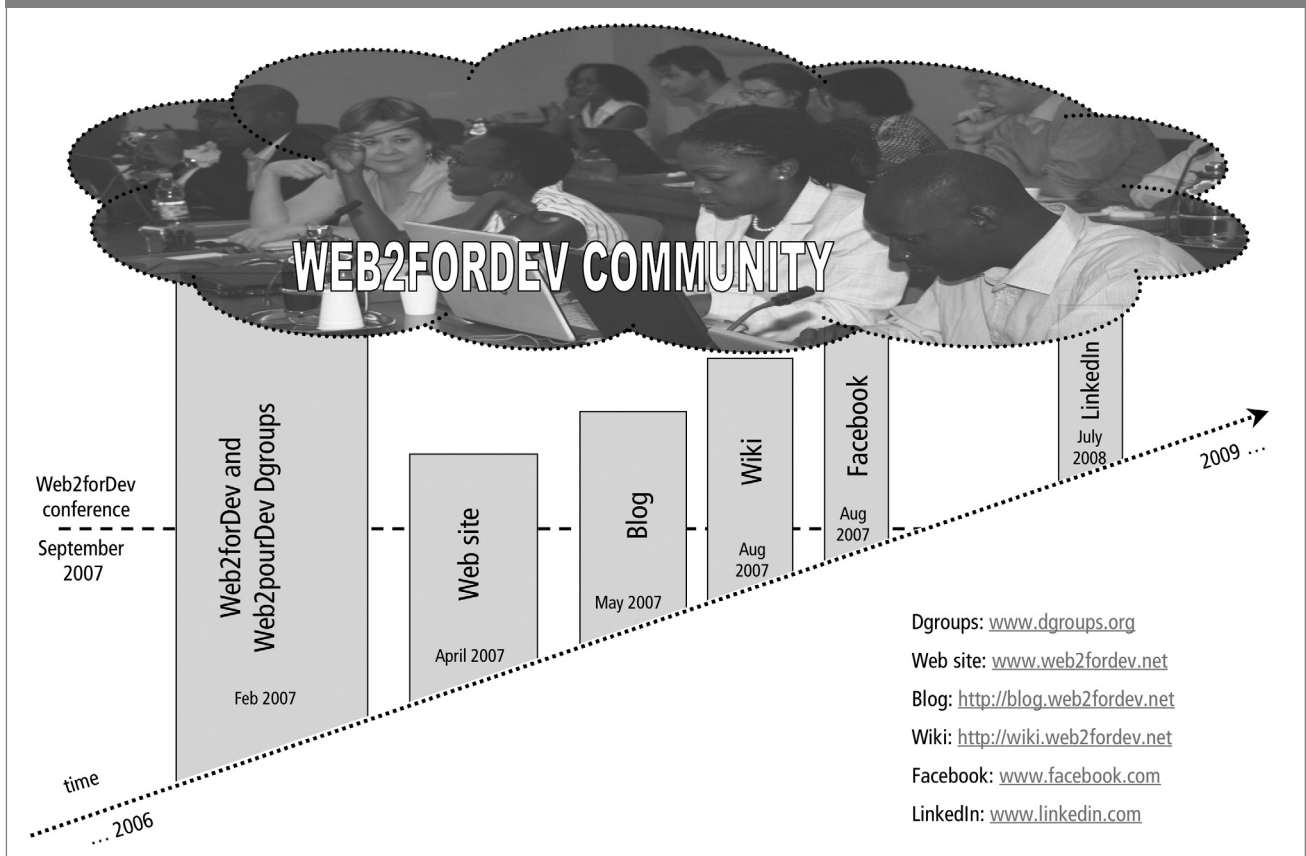| Box 1: What is a community of practice? |
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| A Community of Practice (CoP) is made out of people who |
| • Bond on a voluntary basis by exposure to common problems |
| • Share a common sense of purpose |
| • Use common practices and language |
| • Embody themselves a store of knowledge |
| • Hold similar beliefs and value systems |
| • Collaborate directly, share knowledge and learn from each other |
| Source: Wenger (2002) |

Here, we explore some of the Web 2.0 tools we used to organise the conference, the challenges the organisers faced in supporting such a process – and ways forward towards forming a more committed, interlinked and dedicated community of practice (see Box 1).

In April 2006 the Technical Centre for Agricultural and Rural Cooperation (CTA) invited participants to join forces in organising one of its yearly Information Communication Technologies (ICT) Observatory meetings. CTA proposed to organise a conference to focus on the use of Web 2.0 applications in the context of development. The proposal was well received, so in order to better define the topics to be covered by the event which would later become the 2007 Web2forDev conference, CTA designed and administered a bilingual (English and French) online survey among people working across the globe on ICT for development (ICT4D).

The 450 respondents prioritised which Web 2.0 tools they

Figure 1: Timeline of tools used to organise the Web2forDev conference

Dgroups: www.dgroups.org

Web site: www.web2fordev.net

Blog: http://blog.web2fordev.net

Wiki: http://wiki.web2fordev.net

Facebook: www.facebook.com

LinkedIn: www.linkedin.com

considered relevant for their work and wanted to learn more about. The three main topics of interest were later added to the conference programme:
• shared virtual spaces, remote collaboration and knowledge-sharing;
• appropriate technologies for online publishing; and
• online information retrieval and access.

In October 2006 the initial group of organisers expanded to include the Food and Agriculture Organisation (FAO).[3] A steering committee (SC) was formed including representatives from the 12 participating organisations (for location see Figure 2).[4]

[3] FAO later hosted the Web2forDev conference in Rome.
[4] The organisations involved were: CTA, International Institute for Communication and Development (IICD), FAO, German Agency for Technical Cooperation (GTZ), the Secretariat of the African, Caribbean and Pacific Group of States (ACP Secretariat), Association for Progressive Communications (APC), University of British Columbia Okanagan, International Fund for Agricultural Development (IFAD), Consultative Group on International Agricultural Research (CGIAR), Université Cheikh Anta Diop, Euforic and Wageningen University and Research Centre (WUR).
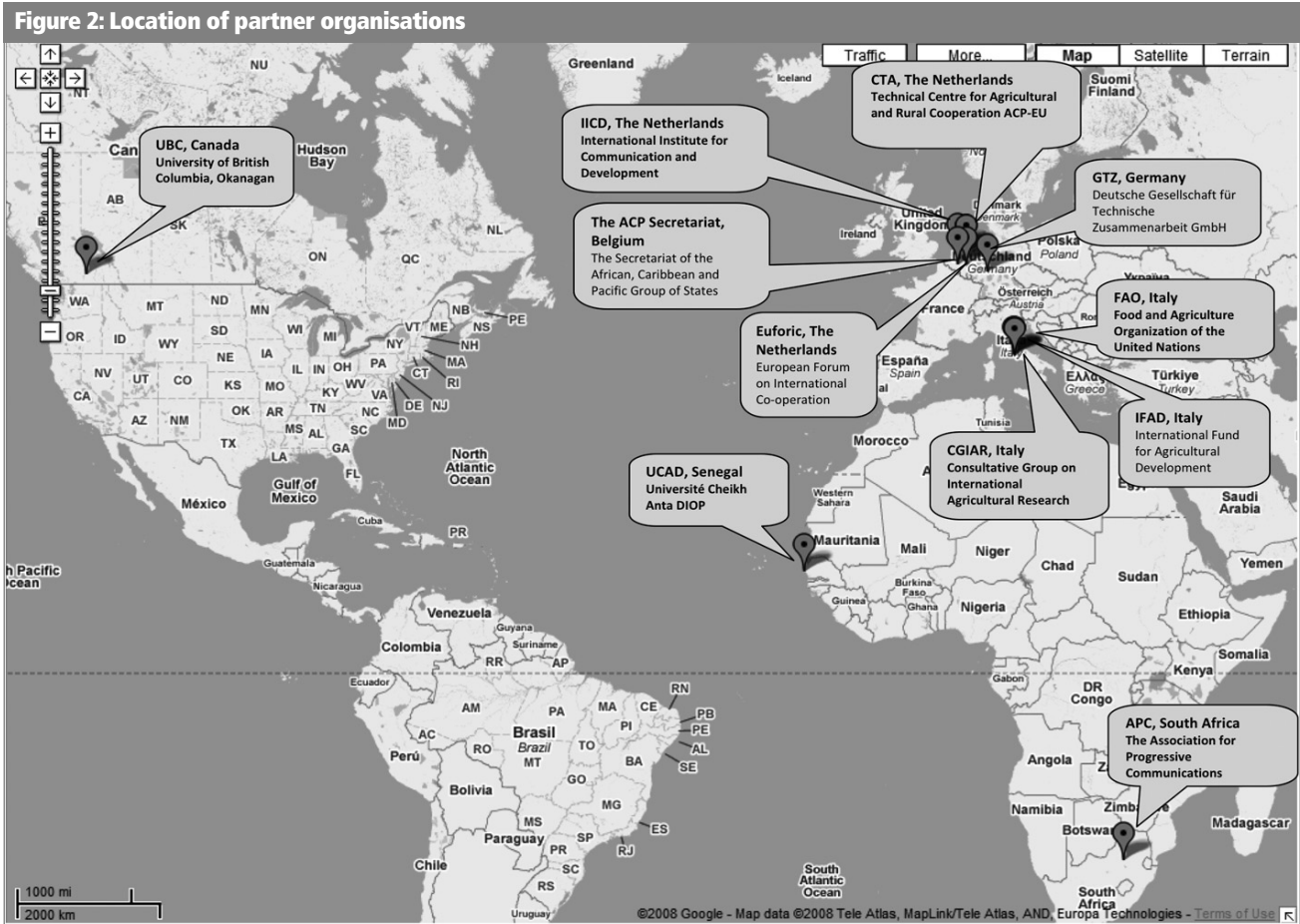
The 'participatory web' at work

The organisers used several information channels and exchange platforms to establish and involve a new Web2forDev community ahead of the conference. The initial online community consisted of interested respondents to the first survey using dedicated electronic discussion lists. These lists were open and other interested individuals were free to join.

Involvement of the Web2forDev community

A number of Web 2.0 applications (see Figure 1) were put in place to develop and nurture the growing Web2forDev community. These supported and enabled effective remote collaboration and communication among the organisers and among the network members and the organisers. All online spaces were created to:
• disseminate conference information in an efficient and timely way;
• enable the audience to share opinions and experiences;

Figure 2: Location of partner organisations

Map labels:

CTA, The Netherlands
Technical Centre for Agricultural
and Rural Cooperation ACP-EU

IICD, The Netherlands
International Institute for
Communication and
Development

UBC, Canada
University of British
Columbia, Okanagan

GTZ, Germany
Deutsche Gesellschaft für
Technische
Zusammenarbeit GmbH

The ACP Secretariat,
Belgium
The Secretariat of the
African, Caribbean and
Pacific Group of States

FAO, Italy
Food and Agriculture
Organization of the
United Nations

Euforic, The
Netherlands
European Forum
on International
Co-operation

IFAD, Italy
International Fund
for Agricultural
Development

UCAD, Senegal
Université Cheikh
Anta DIOP

CGIAR, Italy
Consultative Group on
International
Agricultural Research

APC, South Africa
The Association for
Progressive
Communications

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• provide newcomers with examples of how Web 2.0 tools can be used for development; and
• facilitate peer-to-peer exchanges and networking among Web2forDev community members.

To brand the Web2forDev 'concept', the organisers agreed to earmark online resources relevant to the topic with the tag 'Web2forDev'.[5] At the time of writing, Delicious accounts for close to 1000 items tagged as Web2forDev.[6]

Two electronic discussion groups (DGoups) in English and French began in February 2007.[7] Members have increased

steadily since then. DGroups email lists were initially used to disseminate news about the conference. Afterwards, they became a platform for members to discuss and exchange Web2forDev-related information.

Other exchange platforms included the Web2forDev blog and the Web2forDev wiki. The conference blog was established to share Web2forDev stories prior to and during the conference.[8] It provided a broad audience with current information and offered the opportunity for direct feedback. The wiki was primarily used with participants to elaborate jointly themes for the conference's open space sessions.[9] Throughout the conference the participants could also use the wiki to experiment and get support if needed.

All these Web2forDev spaces featured on the conference

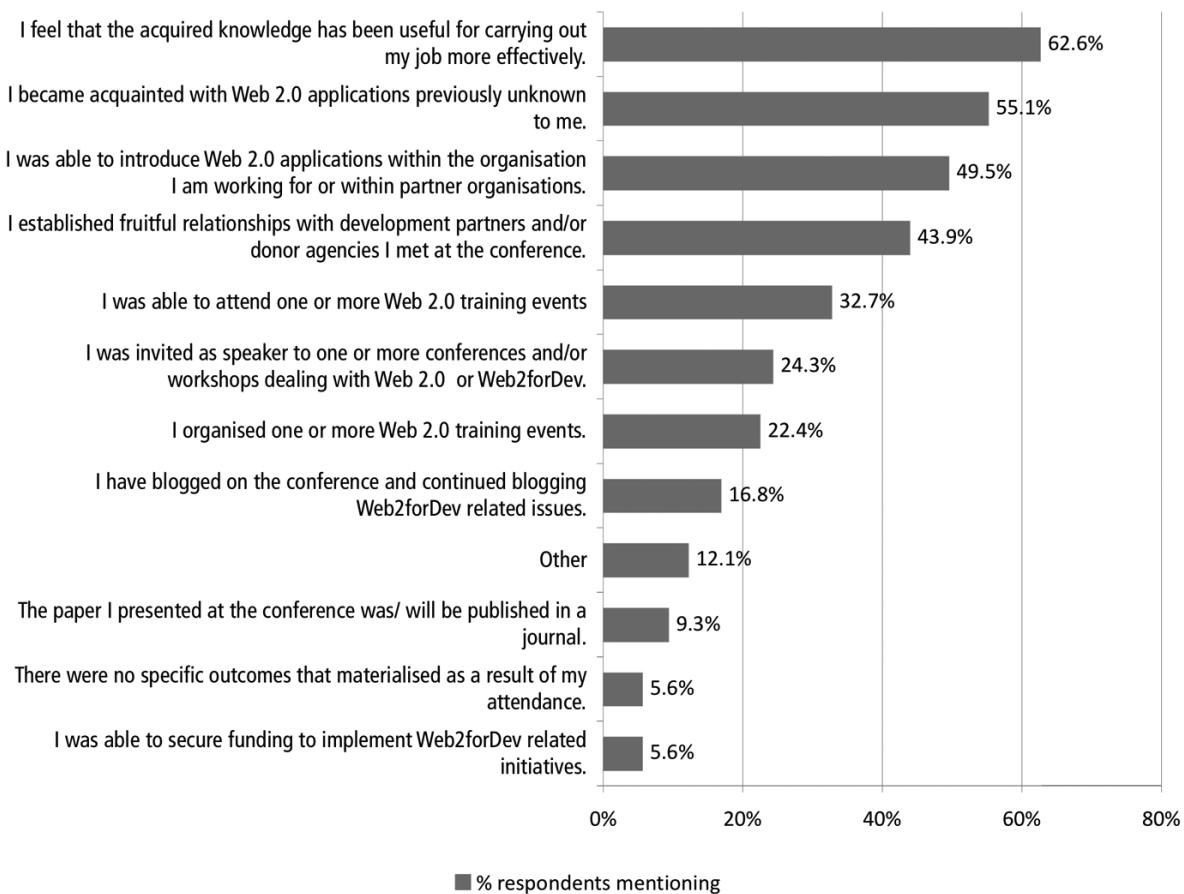[5] For a definition of 'tag' see glossary, p.123. See also Tagging p.117 (this issue).
[6] Delicious is a social bookmarking web service for storing, sharing, and discovering web bookmarks. See: www.delicious.com. See also www.delicious.com/tag/web2fordev and p.119 (this issue) for a short guide to social bookmarking.
[7] DGroups is an online platform offering tools and services for groups and communities interested in international development. See: www.dgroups.org. English [web2fordev] www.dgroups.org/groups/web2fordev and French [web2pourdev] www.dgroups.org/groups/web2pourdev

[8] See http://blog.web2fordev.net. For a definition of 'blog', see glossary, p.121. See also Blogging p.106 (this issue).
[9] See http://wiki.web2fordev.net. For a definition of 'wiki', see glossary, p.124. See also Wikis p.110 (this issue).

Figure 3: Outcome of the conference

I feel that the acquired knowledge has been useful for carrying out my job more effectively.	62.6%
I became acquainted with Web 2.0 applications previously unknown to me.	55.1%
I was able to introduce Web 2.0 applications within the organisation I am working for or within partner organisations.	49.5%
I established fruitful relationships with development partners and/or donor agencies I met at the conference.	43.9%
I was able to attend one or more Web 2.0 training events	32.7%
I was invited as speaker to one or more conferences and/or workshops dealing with Web 2.0 or Web2forDev.	24.3%
I organised one or more Web 2.0 training events.	22.4%
I have blogged on the conference and continued blogging Web2forDev related issues.	16.8%
Other	12.1%
The paper I presented at the conference was/ will be published in a journal.	9.3%
There were no specific outcomes that materialised as a result of my attendance.	5.6%
I was able to secure funding to implement Web2forDev related initiatives.	5.6%

■ % respondents mentioning

website.[10] This was the main gateway to access collaborative spaces and to apply for registration. The website included other Web 2.0 tools (e.g. RSS feeds from the blog and Delicious).[11] There were also featured videos from YouTube, images from Flickr and links to discussion groups.[12][13]

Remote collaboration among organisers

Collaborative technologies enable people to interact with other people located at different geographical locations and within a group more efficiently and, in many cases, more effectively. (Source: Wikipedia).

The organising partners were located across three continents. So the steering committee (SC) relied heavily on Web 2.0 tools to overcome this constraint.

The steering committee regularly exchanged messages via dedicated electronic discussion groups. DGroups were set up for the committee and its subcommittees. A collaborative private work space was established using Microsoft SharePoint, an online file-sharing service. Conference-related documents were made accessible to all SC members, who could then access, modify and re-upload these remotely.

For remote discussions most SC members used free voice communications over the Internet (Voice over Inter-

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[10] See: http://2007.web2fordev.net
[11] For definitions of RSS and social bookmarking see glossary, p.121, and also RSS feeds p.115 and Social bookmarking, p.119 (this issue).
[12] See www.youtube.com.
[13] See www.flickr.com.

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net Protocol or VoIP) like Skype.[14] Remote conferencing was supported by desktop-sharing software, which simultaneously displays the desktop of the meeting convener on computer screens and/or projectors at the partner organisations.[15]

Challenges in the process

The process of organising the conference and animating the Web2forDev community was challenging. Those involved had to learn and adapt to fast-changing environments and become themselves adopters of innovation.

Different working styles and attitudes

In 2006 when the organisers initiated the various activities, the concept of Web 2.0 was only two years old and therefore relatively new – in its complex facets – to some of the participating organisations. We
- made use of remote workspaces;
- did PC2PC conferencing;
- viewed, discussed and modified documents displayed simultaneously on monitors in different countries; and
- invited people to collaborate on developing sections of the conference programme via an open wiki.

Everyone involved had to be open to innovation, to change their working habits – and have an eagerness to explore and learn. However, several Web 2.0 applications posed a real challenge for the responsible Information Technology (IT) departments, especially in larger organisations, who were sceptical and concerned about IT security in general. So partners needed to be ready to negotiate permissions with their IT colleagues. For example, some steering committee members' organisations did not allow the use of Skype.

As a result, adopting the tools was uneven and occurred at different times. Some SC members used only a selection of the tools available while smaller groups coordinated the

Media team members at the conference writing for the Web2forDev/ Web2pourDev conference blog.

Photo: Anja Barth

use of specific applications (e.g. wiki, blog, desktop sharing, etc). The most commonly-used tools were DGroups, SharePoint and VoIP. Most people were familiar with DGroups. SharePoint was the main application used by (almost) all SC members to work on documents remotely. Skype was pivotal to participating in remote conferencing. Other applications like blogs and the wiki were considered as 'optional'. These were used by the few SC members who were more personally engaged in sharing information and opinions about Web 2.0 for development.

Keeping up-to-date with the rapidly evolving Web 2.0 landscape

Prior to the conference, Web 2.0 tools were frequently upgraded and new ones proposed for use. The challenge was to keep track of such a fast-changing environment. So we needed to understand which tools could be useful before we proposed adopting them. Here, we were constrained by a lack of time and some hesitancy to explore. All SC members had to deal with an overload of ideas and proposals for innovative adoptions. People were apprehensive about adopting unknown and (at that time) untested tools. This was felt in the 'body and spirit' of email exchanges.

Additionally, some proprietary file formats could not run on open source applications and this caused concern and additional work. One example was an innovative technology used to show both a live video of a presenter and their presentation concurrently and render these as a streaming presentation online.[16] At that time, the limitation encountered consisted in the fact that the technology required at least Internet Explorer 5.5 and a Windows Media Player 9.0 to play the full features.

[14] For a definition of 'VoIP', see glossary, p.123 (this issue). For more information on Skype visit: www.skype.com
[15] For more information visit the Lotus Sametime Unyte website: www.unyte.net

[16] See: www.presentations2go.eu

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The Web2forDev conference

The Web2forDev story reached a climax with the Web2forDev conference on 25th–27th September 2007 at the FAO headquarters in Rome, Italy. The conference itself was preceded by a one-day 'Web 2.0 taster day' where participants less familiar Web 2.0 tools were given hands-on demonstrations.

The participants

The conference brought together a broad community interested in Web 2.0 for development. Around 300 people from over 40 countries from mainly Africa, Europe and Latin America attended. Participants included ICT specialists, information and communication experts, researchers, trainers, application and system providers, software developers, policy makers and enablers.

The conference dynamics

The conference aimed to create innovation, new partnerships and collaborations. The programme combined presentations, plenary discussions, open spaces, incubator sessions and a market place. We allocated plenty of time for the participants to actively work and share ideas on how to apply Web 2.0 to the advantage of Southern development actors.

Plenary sessions included several keynote speakers, such as Anriette Esterhuysen of APC and Ethan Zuckermann of Global Voices (see Esterhuysen and also Zuckerman, this issue). These presentations reflected the varied understanding of the meaning of 'participatory web for development'. They ranged from classic information communication technologies (ICTs) such as radio, television, landline telephones, emails and mobile phones to highly interactive, innovative and empowering online applications.

Interesting case studies included:
• the BROSDI project in Uganda where farmers started experimenting with web-based tools and mobile telephony to improve knowledge sharing and planning (see also Karamagi and Nakirya, this issue);[17]
• the GINKS experience in Ghana where video blogging is used to exchange information (see also Deh, this issue);[18]
• an overview on copyright issues when publishing online together with the presentation of the Creative Commons project;[19] and
• how Google mash-ups were used to combine diverse information, e.g. how Google maps could be combined with datasets available for climate modelling experiments and seasonal weather forecasts.[20]

During panel discussions experts examined issues such as opportunities and challenges for Web 2.0 in rural development and community empowerment. The two key challenges were connectivity and bandwidth. But there were also discussions about how we develop human relationships to build trust and confidence when working in cyberspace without face-to-face interactions.

All plenary and several parallel sessions were webcasted – videoed and uploaded onto the Internet for others to watch online.[21] Participants wrote and recorded their feedback on large boards called Democracy Walls which were then analysed during plenary sessions.[22] Journalists and participants conducted interviews and wrote reports on the event using different media, including the Web2forDev blog.[23] Interviews were posted on YouTube, BlipTV and Google Video. Blogging peaked during the event. Just ahead of the conference, running an Internet search using the Google search engine for 'Web2forDev' would return close to 102,000 hits.

Outcome and follow up activities

The conference created a lot of interest in promoting and adopting Web 2.0 tools across institutions and particularly in developing countries. Nevertheless, participants generally agreed that Web2forDev **is not about the tools but about the people**. Both participants and presenters emphasised that it is most important to listen to the needs of those whom the tools should serve and to discover how people can make best use of them.

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[17] Busoga Rural Open Source and Development Initiative (BROSDI): www.brosdi.or.ug
[18] Ghana Information and Knowledge Sharing Network (GINKS): www.ginks.org
[19] See: http://creativecommons.org
[20] 'Climate Change Mashups,' presented by Michael Saunby at the Web2forDev conference See: http://saunby.blogspot.com/2007_09_01_archive.html Short URL: http://tinyurl.com/saunby
[21] By RAI TV and via the conference website using Presentations2Go technology. See: www.presentations2go.eu
[22] See: *PLA* 58 Tips for Trainers article about Democracy Walls.
[23] See: http://blog.web2fordev.net

Participants gather during a plenary question and answer session. The session is being webcasted – videoed and uploaded onto the Internet for others to watch online.

"Both participants and presenters emphasised that it is most important to listen to the needs of those whom the tools should serve and to discover how people can make best use of them."

The organisers administered an online end-of-conference survey to get feedback on the event and related activities as well as guidance on future directions. One year later (September 2008) another survey was done to assess the impact of the event and to seek guidance on what future Web2forDev related initiatives we could invest in, promote and support.

A number of initiatives have followed the event. Among others, CTA has produced a special issue of *ICT update* dealing with Web 2.0.[24] CTA and GTZ both organised awareness-raising workshops within their organisations. Web2forDev-related trainings have addressed diverse audiences, including:
- policy makers (ACP embassies in Brussels in partnership with CTA, Euforic and ACP Secretariat);
- Indigenous Peoples (in partnership with CTA and Indigenous Peoples of Africa Co-ordinating Committee (IPACC); and
- researchers and educators (in partnership with CTA, Commonwealth of Learning (COL) and Regional Universities Forum for Capacity Building in Agriculture (RUFORUM).

APC and FAO are working together to develop an IMARK self-instructional training materials package on Web 2.0 to be released in 2009.[25] FAO continues to facilitate discussions around e-agriculture as a follow-up action to the 2005 World Summit on the Information Society (WSIS).[26]

In addition, CTA has launched newsfordev.[27] This is a customisable news aggregator covering development issues. CTA also produced jointly with People TV an eight-minute documentary (English and French) on Web 2.0 applications used in the African context, called 'Agriculture and New Technologies – Web 2.0 in Africa'.[28] The documentary was

aired on 38 TV stations in Africa in June 2008 and is currently available online on Google Video and on Dotsub.com (with multilingual subtitles) and syndicated on a number of websites.[29] Members of the Web2forDev community have volunteered their time and skills to translate the subtitles of the documentary in many languages, increasing the potential outreach of the message.

For APC, Web 2.0 technology is the focus of many projects in policy advocacy, research, capacity building and content development. APC also uses some Web 2.0 applications for internal communication and management.

The Information Communication Technologies Knowledge Management (ICT-KM) Programme of the CGIAR released a Web2forDev brief (an article and a presentation) to encourage the staff who had attended the conference to give seminars in their centres.[30] Web 2.0 tools are a consolidated topic of the Knowledge Sharing Workshops co-organised by the programme.[31] They are also covered in the Knowledge Sharing Toolkit.[32]

IICD has been supporting a series of seminars with practical hands-on training for partner organisations in Zambia, Burkina Faso, Mali, Ghana, Ecuador, Bolivia (e.g. Radio La Luna, Ecuador, CIDOB, Zambia Association for Research and Development, and Bolivia).[33] A recent workshop in Uganda focused on how to integrate Web 2.0 applications and services in the work of ICT4D trainers.

The concept Web2forDev is under consolidation. The University of Colorado for instance is offering courses on Web 2.0 for development.[34] A definition of Web2forDev has been jointly elaborated and has been entered on Wikipedia.[35] There is also the new Web2forDev Development Gateway. This is a new initiative which aims to act as a start-

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[24] See: http://ictupdate.cta.int/en/(issue)/39
[25] The Information Management Resource Kit (IMARK) is a partnership-based e-learning initiative to train individuals and support institutions and networks in the effective management of agricultural information. See: www.imarkgroup.org
[26] See: www.e-agriculture.org/
[27] See: www.newsfordev.org/
[28] See: http://tinyurl.com/56gumk and http://tinyurl.com/5nm9el

[29] Web syndication is where material on one website is made available to multiple other websites via RSS feeds. See glossary, p.124 and also RSS feeds, p.115 (this issue)
[30] See: http://ictkm.cgiar.org/Web2forDev_Participatory.pdf
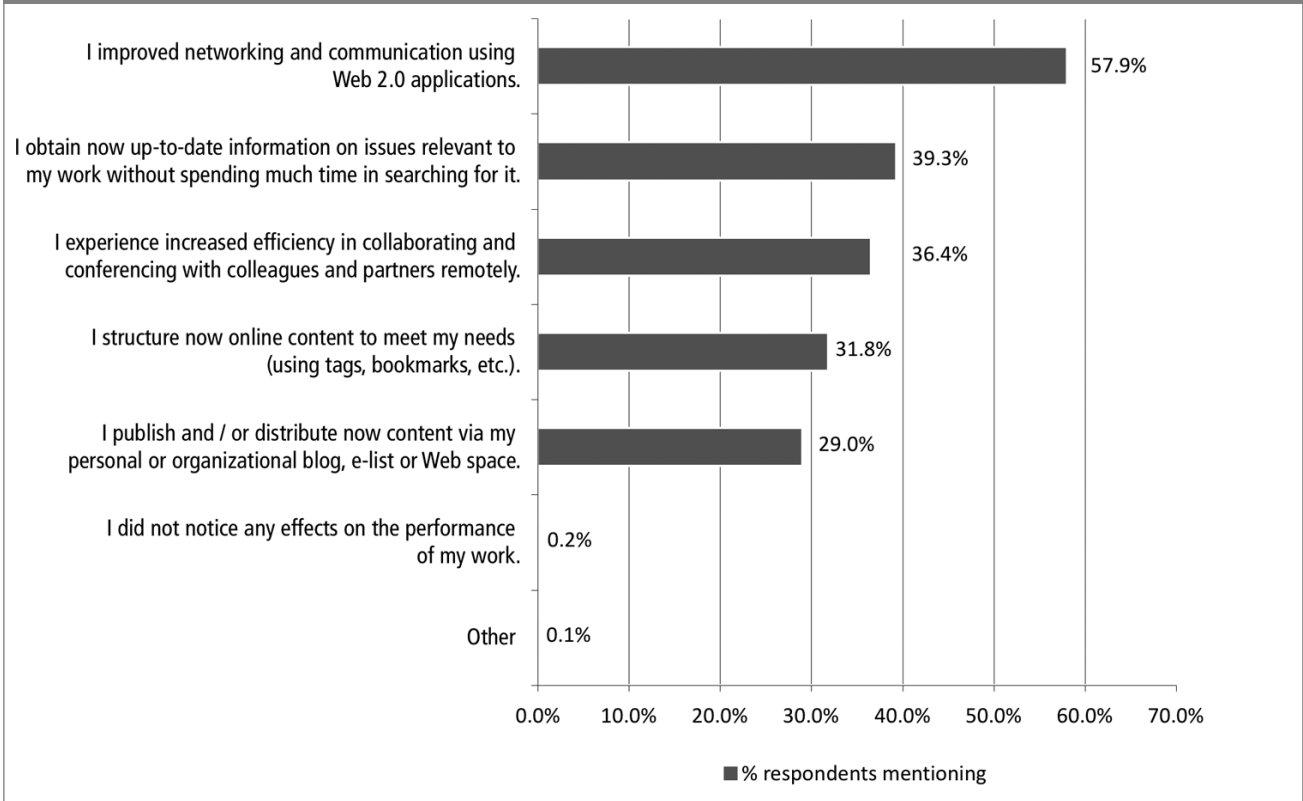[31] See: www.kstoolkit.org/KS+Workshops
[32] See: www.kstoolkit.org
[33] See: http://ticbolivia.net
[34] See: www.colostate.edu/Orgs/IISD
[35] See: http://en.wikipedia.org/wiki/Web2fordev

Figure 4: Improvement in the performance of work

ing point for Web 2.0 learning and sharing experience in the context of development work.[36]

Impact of the conference
One year later, participants reported that the conference has had a positive impact on their professional lives.[37] Respondents underlined their interest for further discussion and follow-up activities. They have been able to make successful use of knowledge and contacts gained in their daily work (see Figures 4, 5 and 6). Their comments include:

We are now able to reduce the cost of ICT with the introduction of Web 2.0 applications without compromising productivity and efficiency.

Attending the conference gave me the confidence and evidence to back up the recommendations I put forward [to my organisation] in investigating these new tools.

Respondents also provided concrete examples on how they used Web 2.0 applications in the context of development. Examples include:
• using wikis and blogs in distance training on information management;
• using e-learning platforms to allow colleagues to access online educational materials;
• creating a wiki to share ideas, minutes, documents within teams;
• conducting a joint evaluation exercise involving about 40 participants;
• using tagging to help structure and share interesting information; and
• increased youth participation within adult-centred development initiatives.

However, respondents also identified several main challenges which remain:

At the moment we have a problem with bandwidth so using Web 2.0 tools in our organisation may be difficult.

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[36] See: www.web2fordev.net
[37] The results of the survey (119 respondents) are available here: http://tinyurl.com/656qyn

Figure 5: Fields to put acquired knowledge into practice
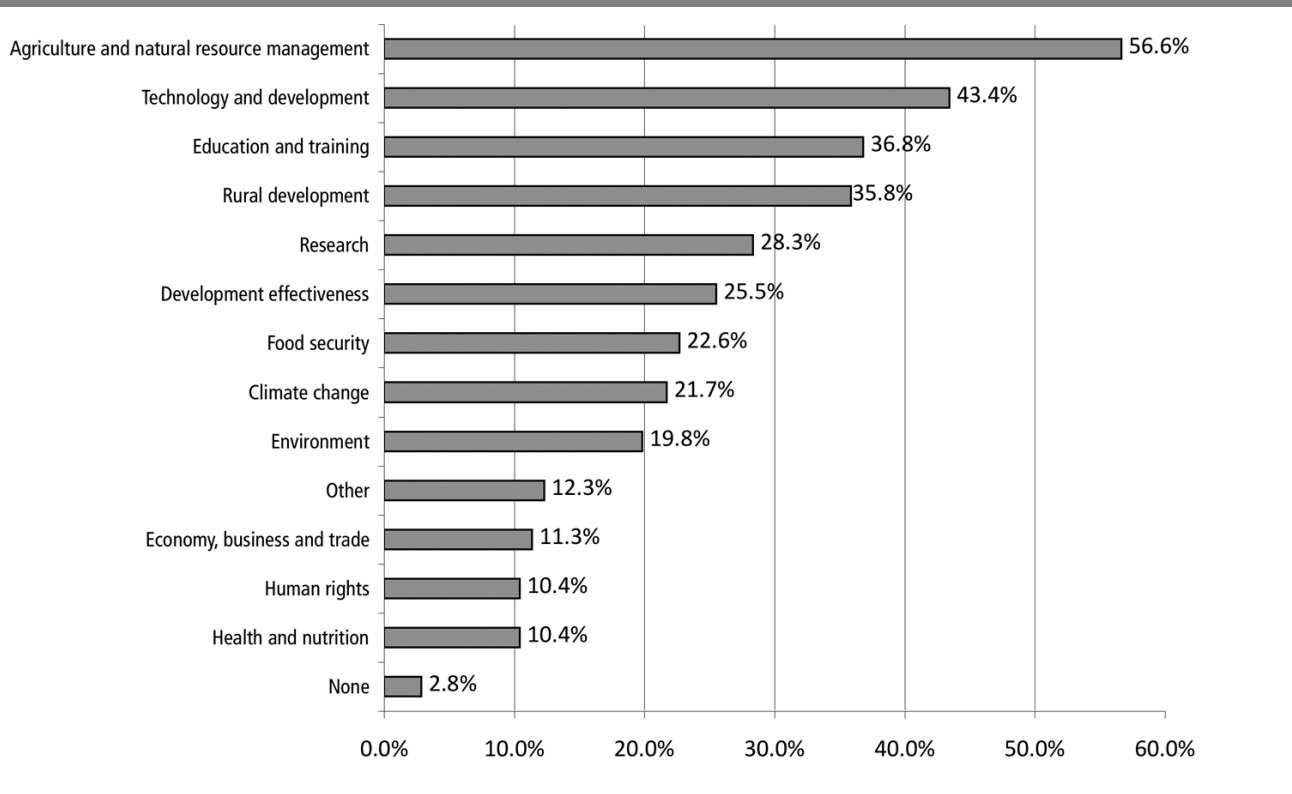
The challenge was to find our way through the plethora of available systems.
The lack of applications in native languages is a big limitation, because not everybody speaks English.

We have too little time for the creation of useful and valuable content and uptake has been low. These tools are generally seen as 'add-on' activities, not core activities that contribute to the main mission of the organisation.

There have been several intellectual property right issues and a real need for evaluation of what materials could be accessed openly and which were not appropriate for cultural and intellectual property right issues.

The principle challenge for Web2forDev identified at the conference remains to be the issue of sufficient bandwidth – especially in the developing world. For organisations working in both the North and the South it is difficult to choose from the enormous number of applications and to integrate the idea of Web2forDev into their daily work.

The way forward

At present the Web2forDev community gathers mainly around the two electronic discussion DGroups and shared spaces on LinkedIn and Facebook.[38][39] Although there have been a variety of Web2forDev activities before, during and after the event, among the respondents there was a general feeling that performance, outreach and impact of Web2forDev-related activities could benefit from increased sharing and added coordination. Issues remain around language, limited bandwidth and receiving guidance on choosing appropriate tools for the South. Institutions remain hesitant about investing staff time to explore and invest in Web 2.0 innovation. The September 2008 survey respondents identified several key issues to be addressed in the future. People involved in practicing and/or promoting Web2forDev need to:

[38] LinkedIn is a social networking site for professionals: www.linkedin.com
[39] See: Web2forDev pages: www.facebook.com/group.php?gid=4492058025

"Those of us involved in practicing and/or promoting Web2forDev need to develop and promote Web 2.0 tools that are appropriate for low bandwidths and mobile telephony."

• Substantially improve information- and experience-sharing.
• Further raise awareness and increase capacity to integrate Web 2.0 applications into existing information portals.
• Carefully monitor Web2forDev initiatives, which should also be followed by impact assessments. Resulting outcomes should feed into the online debate and serve as guidance for future initiatives.

However, the greatest challenge that most practitioners identified was encouraging organisations to adopt Web 2.0 applications and implement a 'Web2forDev' culture across the development arena – and more importantly, in the South. Those of us involved in practicing and/or promoting Web2forDev need to develop and promote Web 2.0 tools that are appropriate for low bandwidths and mobile telephony.[40]

Nonetheless, the building blocks for developing a stronger and more cohesive Web2forDev community of practice are in place. They are within reach of those who are interested in adopting and promoting the innovative use of appropriate Web 2.0 tools and practices in support of international development.

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[40] See also Samii, p.44, Karamagi and Nakirya, p.59, Okolloh, p.65 and Tips for trainers, p.105 (this issue).