

Monitoring and Evaluation of Peacebuilding: The Role of New Media

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Introduction

The technological advances that facilitate our daily communication and organisation requirements have triggered hopes about their applicability in challenging circumstances, such as crisis or conflict situations. The world wide web and especially mobile phone networks are not any more reserved for higher-income countries but these technologies are today available in most of the world's countries, including regions in which humanitarian, development and peacebuilding workers operate, constantly seeking new tools and instruments that help them master their challenging tasks (Smith et al. 2011, p. ix). According to statistics of the International Telecommunication Union (ITU), mobile phone penetration rates are at almost 45% in low-income and about 7 % in lower middle-income countries (ITU 2011). About 56% of all mobile phone subscriptions are from poorer countries which at the same time experience the highest growth rates (Zambrano & Seward 2010, p.12). It is estimated that 80-90% of people in less developed countries have access to a cell phone (Zuckerman 2009, p. 88).

Donors and the public have high expectations of how relief, conflict prevention and development interventions should be conducted and what outcomes they should achieve. Measuring the impact of peacebuilding activities is usually part of the Monitoring and Evaluation (M&E) of peacebuilding. While some experiences of humanitarian workers applying new media for their operations have already been reviewed by researchers, especially as regards beneficiary communication or humanitarian coordination (e.g. in the 2010 Haiti earthquake response), this study looks at the use of social media, Information and Communication Technologies (ICT) and mobile phones in peacebuilding. It focuses on the potential of new media to improve peacebuilding through supporting monitoring and evaluation.

New media is increasingly and often successfully used for needs assessments and beneficiary communication; but few examples exist in which new media are applied for improving monitoring and evaluation in peacebuilding contexts

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This research paper compiles and elaborates on key challenges, opportunities and lessons for the use of new media in monitoring and evaluating peacebuilding activities. It draws on experiences of humanitarian and development projects in which new media were used specifically for M&E purposes. Further, it presents experiences made by practitioners, both mistakes and lessons learned from pilot projects as well as concerns and reflections regarding these experiences in the literature. This paper aims at inspiring cross-sectoral learning and stimulating discussion among members of the peacebuilding community, where it intersects with the development, humanitarian and technology communities, and seeks to contribute to a culture of openness and transparency regarding lessons learned in pilot projects and the field. This paper applies the umbrella term of “new media” to subsume diverse labels such as “new technologies”, “ICT” or “mobile phones”.

Overall, this paper finds that peacebuilding practitioners have much to learn in terms of new media use from their humanitarian and development colleagues. New media is increasingly and often successfully used for needs assessments and beneficiary communication but only very few examples exist in which new media are applied for (improving) monitoring and evaluation in peacebuilding contexts. In a sense, therefore, peacebuilders are latecomers to an action trend that is far more advanced in other fields.

Other findings of the paper are:

- The one new technology currently believed to hold the largest potential is crowdsourcing for crisis mapping. After its “successes” in Kenya and Haiti, many countries have started using crowdsourcing for various purposes (including earthquake-, flood- and corruption mapping) but it is still too early to draw lessons from most of these pilots.
- The one most frequently used technology is the SMS function of mobile phones. In the developing world, internet-based tools (such as Facebook, Youtube or Twitter) lag far behind mobile phone user rates¹.
- New media use is not the solution to the systemic and structural challenges of M&E of peacebuilding. Focusing too much on data gathering and neglecting underlying issues can hence become a “distraction from the real problems” (Currion 2010).

The paper unfolds its analysis in 4 parts. Part 1 looks at generic issues of M&E as well as those specific to peacebuilding. Part 2 screens the landscape of new media with respect to M&E before Part 3 analyses key benefits and challenges more closely.. Part 4 explores the requirements for M&E of peacebuilding to realise the potential of new media. The conclusion places signposts for future research and practice needs. The paper also includes a series of Annexes with additional information including a glossary, case studies and best practice examples.

1. Monitoring and evaluation of peacebuilding and other fields

Many of the challenges for M&E of peacebuilding relate to the absence of a clear definition of what peacebuilding is, who its actors are, what it tries to achieve and how this should be measured. This lack of a common understanding is also at the heart of the difficulty of doing M&E of peacebuilding. Having “built peace” is relatively difficult to prove, and only very little “hard evidence” or agreed benchmarks exist (cf. Church/ Life&Peace Institute 2008, p.3; Stave, 2011, p.1). This is different for the humanitarian community, for example, in which the number of

¹ Smart phones/ 3G (the “third generation” of mobile telecommunications technology) are not yet widespread in the countries in question.

"saved lives" can be approximated and some shared definitions, indicators and common standards have been developed (such as by ALNAP and SPHERE).

The concept of peacebuilding as applied in the present paper includes projects contributing both directly and indirectly to building peace. For the purpose of this paper, any activity or project taking place in an area affected by armed conflict or in the aftermath of war (cf. Scheers 2008, p.9), aiming at a reduction of violence while trying to improve the living conditions of the population, will be considered peacebuilding.

For the most part, this paper focuses on peacebuilding efforts undertaken by international rather than local actors. This is mainly due to data availability (and reflects the fact that most peacebuilding evaluations are undertaken by international actors (Scharbatke-Church 2011, p.463)) and not to neglect the importance of local communities' skills and knowledge.

In spite of the lack of a common definition of peacebuilding, the peacebuilding community has agreed on one important aspect over the course of the last years: the impact of peacebuilding activities is measurable. This had been a topic of dispute for several decades: early peacebuilding projects did not usually have an M&E component and when calls for M&E emerged, it was argued that peacebuilding was too challenging an activity and operating in too complex a situation to allow for the measurement of its claimed impact (cf. Menkhous, 2004, p.9; Church/ Life&Peace Institute 2008, p.4). Today, practitioners and analysts agree that the impact of peacebuilding is measurable and that while it is certainly true that war and conflict situations are challenging contexts, this is no excuse not to even try and monitor and evaluate their efforts. However, the question remains of how to best measure and operationalise peacebuilding.

Many theoretical frameworks, guidelines and toolkits have been produced by scholars and analysts (cf. Blum 2011, p.1 and Annex 3) but experts agree that M&E of peacebuilding is an ongoing challenge. The OECD on their website describes the current status of peacebuilding evaluation very aptly as "challenging emerging area".

1.1 Generic difficulties of M&E

Some of the challenges posed by M&E of peacebuilding are generic ones that apply to M&E of almost all activities and sectors: it is generally easier to monitor tangible outputs (e.g. infrastructure) and events that have actually happened, than intangible outputs (e.g. education) and events that have been prevented (e.g. conflict) (USAID 2006, p.10). Other challenges however are unique to the specific settings in which peacebuilding typically takes place.

M&E in the development, humanitarian and peacebuilding sectors share the following challenges: (1) low prioritisation compared to other activities, (2) resistance or fear of evaluations by staff, (3) uncertainty of the overall goal of M&E, (4) insufficient capacity to conduct thorough evaluations and linked with that, the difficulty of (ensuring) implementation of evaluation results.

Low prioritisation of M&E: In theory, most practitioners and analysts agree on the need for M&E. It is widely acknowledged at headquarters and field levels that actors are accountable to the populations they serve and must hence evaluate past projects to learn from their mistakes (Stauffacher et al. 2011, p.42). However, there is an important dilemma at the field level. Since sound M&E requires resources, there is often a trade-off between using available funds for new project activities versus conducting M&E of existing operations (Kawano-Chiu 2011, p.8).

Resistance to evaluations: Staff and middle management are often resistant to evaluations for fear of negative consequences arising from admitting and revealing mistakes. Senior

management similarly fears losing funding if being overtly honest and transparent towards donors (Kawano-Chiu 2011, p.8; Menkhous 2004, p.8). Some argue it is a systemic problem of M&E that low incentives exist to conduct and publish sound evaluations (Blum 2011, p.6) and that in fact, organisations have all incentives to report only success and fulfillment of goals in order to secure future funding. This may be further exacerbated by international media attention: identifying failures and admitting mistakes will be easier when evaluations are not intertwined with public relations activities (USAID 2006, p.2).

Uncertainty of the overall goal: The question of what is actually done with the results and what goals evaluations should achieve is another generic M&E issue. Some have identified a tension between evaluations for accountability to donors vs. evaluations for organisational learning (cf. Tsadik/ Life&Peace Institute 2008, p.7; Scharbatke-Church 2011). The field of peacebuilding has historically tended to regard evaluations as a learning tool (Kawano-Chiu 2011, p.17; Tsadik/ Life&Peace Institute 2008, p.7; OECD 2008, Scharbatke-Church 2011) however, not a lot of learning has actually happened at levels higher than individual projects (Scharbatke-Church 2011) and again, there are no consequences for not learning from evaluation results (ibid.). An exacerbating factor why some organisations fail to learn is high staff-turnover. The fact that knowledge is lost as the individual leaves should be seen as an important incentive to improve organisational learning (Church/ Life&Peace Institute 2008, p.5; Stauffacher et al. 2011, p.3; USAID 2006). The debate is still ongoing, with some arguing that there should be separate processes producing a) learning and b) accountability evaluations (Kawano-Chiu 2011, p.15; Blum 2011) and others claiming that good evaluations must reconcile both goals (Carver & Sartorius 2005, p.2; Blum 2011, p.2).

Lack of capacity in conducting evaluations and implementing their results: M&E terminology is often not used in a proper and coherent manner (Arsenault et al. 2011, p.15). Theoretical confusion exists e.g. with regard to distinguishing outputs, outcomes and impacts; practical difficulties regard the formulation of indicators or good evaluation questions (Rummel-Shapiro). The reason for this is often a lack of basic M&E knowledge (Kawano-Chiu 2011, p.8). While there is no need to employ only trained scientists for M&E, staff need basic social science research skills (Spurk/ Life&Peace Institute 2008, p.11; Kawano-Chiu 2011, p.13) and be encouraged about taking M&E seriously.

Box 1: Recommendations to address generic difficulties of M&E

Low prioritisation of M&E

- Specific parts of a given budget could be earmarked by donors and transferred to the peacebuilding actor for the purpose of M&E after completion of a project only. This could avoid the use of M&E funds for other activities (Spurk).

Resistance to evaluations

- A culture of transparency and openness about mistakes and failure needs to be established. Organisational cultures need to embrace the concept of "failing forward".
- Since donors are often the main driving force to conduct evaluations (Stave 2011, p.1; Menkhous 2004, p.1), they should make clear what types of evaluations they expect.
- Donors might consider sanctions for poor evaluations (Kawano-Chiu 2011, p.35; Spurk). They should encourage evaluations done for learning, not for demonstrating successes (Stave 2011, p.6; Blum 2011, p.11; Stauffacher et al. 2011, p.42) (cf. point below).

Uncertainty of the overall goal

- Improving and diversifying reporting formats could attenuate this tension. While the evaluation process could be designed in a manner “broad and honest enough” to cater for both, reports to donors could emphasize the results achieved with regard to accountability while internal materials should be designed with regard to learning and improving proceedings; short fact sheets unveiling mistakes, experiences and lessons learned could be made available to peers and the public.

Lack of capacity in conducting evaluations and implementing their results

- There is a need to train expert evaluators for their specific work contexts.
- Existing staff skills should be fostered and additional capacity built for conducting evaluations and implementing results (Kawano-Chiu 2011, p.13).

1.2 Specific difficulties of peacebuilding M&E

Besides these generic M&E issues, there are some challenges specific to M&E of peacebuilding.

Lack of peacebuilding data: According to some experts, monitoring and overall peacebuilding data is generally insufficient (Stave 2011, p.6). Baseline studies are only rarely conducted before project implementation (Scharbatke-Church 2011). To compensate, costly and time-consuming surveys must be undertaken (USAID 2006) and informal reports and sources of lower quality are considered that would not be accepted otherwise (Stave 2011, p.6). Experts agree that in general, there is a need for more data on peacebuilding.

Access to peacebuilding data: In those peacebuilding contexts in which a vast amount of data exists, it is often not available for all interested organisations (Rieger; Rummel-Shapiro; Holmlund). Often, peacebuilding faces the “bridging problem” between data gathered by humanitarians during crisis response and data collected by development practitioners at a later stage (Rummel-Shapiro).

The “scale problem” (Blum 2011, p.4): The international system usually responds to short-term pressures by implementing projects. In peacebuilding, likely more so than in humanitarian settings, there is a tension between the outputs and outcomes that may be achieved at the project level and the project’s impact on “peace writ large” (cf. Menkhaus 2004, p.6; cf. Fischer 2009, p.91; Blum 2011). This question lastly goes back to asking whether impact can actually be proven in peacebuilding at all or whether evaluations should focus solely on outputs and outcomes (Spurk). Promoters of long-term oriented and sustainable peacebuilding emphasize the importance of strategic and long-term monitoring to account for the fact that “in log frames, the peace process is linear. In reality it isn’t and it shouldn’t be.” (Interpeace; on log frames cf. Arsenault et al. 2011, p.17; for a criticism of log frames see Stave 2011, p.3 and Scheers 2008, p.38). This shows that there are two different types of “peacebuilding monitoring”. One is the monitoring of particular projects that are being implemented and evaluated just like development or humanitarian projects (peace projects). The second type is the monitoring of the overall peace development in a country or region, based on general indicators (peace processes). This paper argues that the full potential of M&E of peacebuilding lies in the combination of project and process evaluations.

1.3 Requirements of peacebuilding M&E

After portraying the issues specific for M&E of peacebuilding, the question remains whether peacebuilding contexts are unique or somewhat comparable to humanitarian or development

contexts which would enable the application of standards from these contexts to peacebuilding (Paffenholz & Reyhler 2007, p.42).

Those arguing in favor of the distinctiveness of peacebuilding maintain that actors need to work with time sensitivities and security issues, undergo high risks and have to adapt to quickly changing dynamics (Kawano-Chiu 2011, p.11). Furthermore, access to key resource persons for M&E is very difficult, possibly dangerous and sometimes impossible. Many more factors complicate M&E (Arsenault et al. 2011, p.6), such as the fact that most people surveyed suffer from trauma (Scharbatke-Church 2011) and evidence exists that not few M&E projects are disrupted by the difficult context conditions (Arsenault et al. 2011, p.10).²

Opponents to this view argue that disaster response and human rights interventions take place and are evaluated in similarly chaotic circumstances (Kawano-Chiu 2011, p.10; Spurk/ Life&Peace Institute 2008; Chigas&Woodrow / Life&Peace Institute 2008, p.19). They argue that it is necessary to build mechanisms with sufficient flexibility to accommodate for these challenges across sectors (Arsenault et al. 2011, p.22). Experts agree that it is challenging to even understand the very complex contexts peacebuilders are operating in (Stauffacher et al. 2011, p.20) but, again, that whatever complex and difficult the circumstances, this must not be an excuse to not monitor project implementation or effective peacebuilding at large.

The question that ensues is how to go about measuring impact and how to build indicators for this purpose. It has proven as a good practice to combine universal and contextual indicators for M&E, acknowledging the diversity of peacebuilding contexts (Stave 2011, p.3; cf. Menkhaus 2004, pp.4, 9). Parties generally agree that a mix of qualitative and quantitative data is desirable and that "some crucial aspects of peacebuilding include perceptions" (Menkhaus 2004, p.4; Spurk; Brinkman; Rummel-Shapiro). The current trend goes hence towards participatory M&E practices including surveys, perception studies and "active involvement" of the "direct stakeholders", also as an attempt to triangulate data obtained from official sources.

From this presumed specificity of peacebuilding follow some requirements for M&E systems: They need to be sufficiently flexible to work with inconclusive data and consult a variety of sources, among which ideally firsthand accounts of affected populations (Scheers 2008, p.19 & 23). This is however often constrained by the feasibility to collect data given time, security and resource constraints (Menkhaus 2004, p.6).

One promising instrument in the face of these constraints, are the new technologies that have been applied in response to the Haiti earthquake and cholera epidemic in 2010 and in subsequent humanitarian and crisis situations in other parts of the world. The international community has since become interested in the potential of social media tools, mobile phone technology, crisis mapping via crowdsourcing and other tools piloted in these contexts. While some of them are well-documented and critically examined, only very few examples of new technology use exist in peacebuilding projects. But despite this lack of projects and evaluations, peacebuilders, just like humanitarian workers, are most hopeful that the use of these technologies may help alleviate suffering, save lives and improve people's living conditions.

Among the many existing ideas and initiatives of how to improve M&E of peacebuilding, this paper focuses on one, namely the use of new technologies and new media to improve the monitoring and evaluation of both peace projects and processes.

² Cf. the OCHA "real-time" evaluation that states that the team could not access the Dadaab refugee camp to make interviews, Global Emergency Group 2012.

2. The current landscape of new media for M&E

While there is no shared definition of peacebuilding (or M&E of peacebuilding), defining new and social media is not much easier: it seems like the terminology is still struggling to keep up with the speed of the developments in terms of innovation and hybridisation that the technologies undergo. Some experts suggest to speak of ICT or "Internet and mobile phones" for now because the terms "new" and "social media" are not entirely clear or universally agreed (Nashat; Spurk).

In the developed world, the concept of social media is often associated with social networks (such as Facebook and Youtube) or targeted marketing (of the private sector). In the developing world, processes such as protest, contestation and political mobilisation (e.g. the Arab Spring) are linked to that label. This paper will use the umbrella term of new media rather than social media to include all kinds of media (including mobile phones) and the different social and other functions they may perform.

It is important to acknowledge that not all new media are the same or may be applied for the same purpose (such as M&E). Rather, any approach to communication or M&E over new media should be multiplatform and responsive to the ongoing hybridisation of media such as tweets sent over SMS and then read out over the radio before their inclusion into a blog article, etc. (cf. Twitmobile).

Among the many ideas of how to improve M&E of peacebuilding, there is the intuition that new technologies and media can help tackle and overcome some of the above-mentioned difficulties, just like challenges in the private and the public sector have been addressed– for example by SMS-marketing and websites such as fixmystreet.com. This is interesting, since for peacebuilding, almost no "hard evidence" exists proving their usefulness. Only a few years ago, organisations, such as *ICT4Peace*, had a difficult job raising awareness among skeptical international actors about the opportunities provided by new technologies. Now, this trend has reversed, almost all agencies are convinced of the new media's high potential. What is needed now are critical assessments and reflections of the downsides and risks involved, to slow down the new media euphoria.

More research is required to provide evidence for the potential of new media in diverse operations. It is in this light that this paper now investigates the potential of new media to improve the M&E of peacebuilding: what can be expected from their use and what not?

In many international organisations' reports, anecdotal evidence can be found that technologies such as Frontline SMS are being used to "improve the reporting of issues to inform response" (Smith et al. 2001, p.25). But only very few organisations provide information beyond these anecdotes and explain what they are doing more specifically.

A call for good practices and experiences made in regard to using new media for the M&E of peacebuilding among practitioners in March/April 2012 revealed a very limited number of responses. When directly approached, many organisations admit they are in early stages of pilot projects experimenting with these new technologies and still hesitant to share their experiences with others (Smith et al. 2011, p.52).

Overall, it seems like the development and humanitarian sectors are more advanced in terms of using new technologies in their operations in general and potentially also for their M&E (cf. Annex 2).

Many of the published "success stories" highlight the potential of using new technologies as a tool for M&E, such as Bott et al. who are stating that crowdsourcing "can also serve as

monitoring and evaluation tool for development and humanitarian programs evoking feedback directly from the beneficiaries" (2012, pp.7, 34).

Probably related to the "uniqueness" discussion about peacebuilding as outlined above, some peacebuilders are however still skeptical whether they should use new technologies in their operations. Meier of Ushahidi recognises with regard to crowdsourcing technologies: "Reservations to crowdsourced initiatives of any kind are very high [...], when it comes to conflict or post-conflict situations" (Bott et al. 2012, p.12).

Practitioners of all three sectors often have difficulty distinguishing the monitoring and evaluation of new media and the monitoring and evaluation of projects and processes *through* new media. An example of M&E of new media would be conducting (paper) surveys and focus groups in order to find out whether affected populations benefitted from receiving alerts and information via SMS or whether aid workers feel their daily work improves through the existence of an internal wiki. An example of M&E *through* new media would be encouraging beneficiary reporting over SMS and voice technologies to assess how a conflict situation evolves or whether an education/ mediation project contributed to a reduction of violence in conflict settlement.

The present paper cannot examine all types of evaluation practices in depth but will focus on participatory monitoring and evaluation practices ("PM&E", cf. Carver&Sartorius 2005, p.2; Fischer 2009, p.92), since they are considered especially apt for conflict settings (Arsenault et al. 2011, pp.15, 23) and especially likely to be conducted with the help of new media.

In their most technical guise, monitoring and evaluation start out as data gathering, which is seen as the main aspect in which new media can support M&E. But M&E must not regard data gathering as a goal in itself. It is important to ensure that gathered data is fed into a larger M&E process (Holmlund), a task that can only partly be helped by new media.

Monitoring is about obtaining data that then needs to be translated into information answering the question to what extent certain indicators have been achieved or not. In the next step, evaluation uses this information and supplements it with additional data analysis.

3. Benefits and challenges of new media use for M&E in other fields

This paper suggests to distinguish between M&E of peacebuilding done through intermediaries such as aid workers actively surveying a population ("digital surveys") and M&E based on the analysis of direct reporting from project beneficiaries or affected populations ("direct reporting"):

- **Digital surveys:** Most processes of data gathering in any field are nowadays supported by some form of technology. It is no longer novel to use voice recording or excel sheets for the recording and analysis of data. However, there is a strong trend towards leaving paper-based methods behind and using digital devices for data collection in the first place. Among the tools used are smartphones, PDAs or data pens that may be directly connected to a database. This increases "efficiency, speed and accuracy of data collection" (Smith et al. 2011, p. 29), since time delays and errors associated with paper transcripts can be avoided. In this sense, almost all evaluation formats, be they mini surveys, longer perception surveys, conflict mapping, media content analysis, storytelling or participatory appraisals, may benefit from support through new technologies.
- **Direct reporting:** Members of the affected population use their own devices or phones they receive from aid agencies. They use various channels to voice their opinions and perceptions, such as texting, calling free hotlines or sending emails. It can further be distinguished whether this "reporting" is *reacting to a call* and aimed at a particular

platform or organisation (such as short codes enabled by aid organisations) or *unsolicited* and made available to the general public (such as posted on Facebook or Twitter). The most open and transparent type of reporting is when beneficiaries are not surveyed but create "content" themselves. This information flow is potentially able to bring donors, an international public and beneficiaries more directly together. As compared to "digital surveys", "direct reporting" is the more innovative approach but also the more challenging task for organisations from the humanitarian, development and peacebuilding fields: It is not suitable to obtain information from security-sensitive contexts and, due to the self-selection bias of the information providers, not a reliable stand-alone source.

3.1 Benefits

When comparing traditional, analog data gathering in contexts of fragile or conflict-affected states with the opportunities brought by new media tools, the following are the main benefits.

Digital surveys

Gaining time: Since mobile digital technology allows skipping the step of manual data transcription and going straight from data gathering to its analysis, real-time accessibility of data is possible (Holmlund). This means in the first place that evidence, upon which decisions may be based, is available more quickly. This is very relevant for M&E of peacebuilding since experts say that in the past, organisations have waited too long to conduct evaluations (Blum) and it has then taken too long to obtain relevant data. Some organisations that have already had some experiences with digital data gathering report gains in speed of 40% (Smith et al. 2011, p.32)³. However, this may be more applicable for the gathering of more "superficial" data, such as "How much did you earn today?", "Was there a violent attack in your village this week?" (Arcand). In theory, these gains in speed should lead to a reduction in staff requirements. Less staff time is needed to enter data and can hence potentially be used to focus on other tasks (e.g. analysis and decision making or ensuring the sustainable use of the information obtained) (Church/ Life&Peace Institute 2008, p.5). However, in reality, data entry clerks often lack the skills for more demanding M&E tasks.

Saving money: The second most often mentioned argument in favor of applying new technologies which replace traditional tools is their cost-effectiveness, since, for example, money for paper, printing and data entry clerks can be saved (Zambrano&Kahl). Most new technologies have relatively low transmission costs, such as the cost for an Internet connection, for the transmission of SMS, etc. Also, most of the tools and software platforms in the humanitarian and development realms are open source software and hence free for use (usually up to a certain limit after which they become liable to pay). Early experiences have further shown that initial high setup costs for the acquisition of devices such as PDAs, data pens, handhelds and mobile phones, offer significant cost efficiencies over time (Smith et al. 2012, p.xii). It is, however, important to keep in mind that the highest costs usually occur for transport of surveyors (Arcand) and are hence not avoided by data collection through intermediaries.

³ "Concern Kenya estimated that the use of DDG [digital data gathering] shortened the usual process of household data collection and entry by up to 4 weeks. Feedback from the Concern pilot in Sudan is that the time to complete a survey using the DDG tool was in fact 40% faster than the paper-based approach. This is echoed by estimates from CRS that the solution piloted in CAR could reduce preparation and collection time by 27% and 21% respectively, and data entry time by 93%." (Excerpt from Smith et al. 2011, p. 33)

Data accuracy: A third benefit is increased data accuracy. Since errors due to transcription from paper or the loss/ destruction of the original documents are mostly inapplicable, collected data is more likely to be accurate. This is further enhanced by the fact that many data entry systems have built-in quality controls that, for example, control the range of values that may be entered in a given field or do not allow the person entering the data to skip survey questions (Smith et al. 2011, p.34).

Geo-referencing: Another feature of great importance in contexts of peacebuilding in fragile or conflict-affected situations is the possibility to include GPS coordinates in the data transmitted. There is a great need for geographical information in peacebuilding (USAID 2006, p.4; Arcand), for example in resource based-, land rights- or territorial border disputes as well as cases of landmines or return and resettlement (Hattotuwa).⁴ GPS coordinates allow to link pieces of information to the exact location where they are reported and software may present this information visually and spatially. Experiences so far, especially in the humanitarian response to the Haiti earthquake in 2010, have shown that the software exists to satisfy most data and analysis needs of the humanitarian community. It is technically feasible to create crowd-sourced maps (Nelson&Sigal 2011, p.19) and translate their data into meaningful information upon which decisions may be based (ibid., p. 15).

Direct reporting

Almost all of the above-mentioned benefits also apply to the scenario in which monitoring is done not by aid workers asking questions, but rather interpreting the data provided by beneficiaries themselves, either explicitly or as by-product of their activities.⁵ In cases where reporting is solicited, the shared information is available real-time, GPS tags may be included and it is cost-effective for agencies to obtain this data that would not otherwise be accessible.

While being an inexpensive medium, the costs of sending and receiving SMS (based on free numbers) should however not be underestimated (Wagner), especially since they often go along with costs of cleaning databases, translating into and from local languages, etc.

Following the recent consensus among peacebuilding practitioners that local populations know best about their respective security and peace situations (USAID 2006; Interpeace) and that multiple sources of information shall be included, new media allow for the improvement of the M&E of peacebuilding projects in as far as they enable reaching a larger number of beneficiaries more frequently than through conventional means. Since mobile phones are widespread (rates of adoption: USIP 2011, p.8) and data transfer technologies such as the Internet, 3G and others, are also on the increase, the use of mobile digital devices seems to be a very apt way to reach out even to more remote groups in dangerous or otherwise inaccessible zones.

Furthermore, most currently available mobile phones allow for transmission of several data formats, ranging from simple text to audio, photos or video files. The increased production of smartphones is likely to intensify this trend in the future.

⁴ There are a number of contexts where different names and spellings of one and the same location exist and the possibility to add a GPS tag increases the possibility to understand without doubt the place in question.

⁵ This paper focuses on data sent in voluntarily as opposed to as a by-product of other communication activities since the data mining done to make sense of the data obtained that way is not currently well-advanced or explored and important issues of data protection and confidentiality remain to be discussed (cf. Zambrano & Seward 2010, p. 32).

One last benefit of the new technologies used directly by beneficiaries is their mobility. Especially in peacebuilding settings, it has been problematic in the past e.g. for waves of displacement or further outbreaks of violence, to stay in contact with specific individuals for panel surveys (Arsenault et al. 2011, p.10). If beneficiaries are equipped with a digital device, they can take it along with them as they move - at least in theory.

3.2 Challenges

There are a number of challenges to using new media for gathering data in the first place.

Lack of media literacy: Impressed by the vast penetration of mobile phones even in the most remote regions and the presence of cell and smart phones in places where no TV, fridge or even clean drinking water exist, international actors have largely assumed that phone owners and users know how to operate their devices. Research, however, shows that this is not necessarily true: Illiterate farmers may well use cell phones to call their families or business contacts but have no idea how to write text messages.⁶ Not just technical training is needed so people learn how to use these mobile devices, but more general familiarisation with these innovations is crucial for people to build up the necessary trust in that technology to use it (ibid.)

Poor infrastructure: While it is true that mobile phones have increased their penetration globally and networks reach out to very remote places, there are still many regions without connectivity: It is estimated that more than 10 percent of the global population and 40 percent of the population in least developed countries are not covered by a mobile network (Zambrano & Seward 2010, p.14). Where coverage exists, it may be limited with slow or not reliable connections. Furthermore, in conflict-settings, existing infrastructure, such as mobile towers are often subject to vandalism; electrical generators and other devices may be stolen (Himelfarb 2010), thus further reducing access to electricity. Only in very few contexts do solar or wind-up chargers exist. People in many least developed countries may only infrequently charge the batteries and hence not reliably use their mobile phone. Any new technology should be equipped for offline capability and synchronisation (Hattotuwa).

Political and cultural obstacles: Assuming that people are trained and communication infrastructure and connectivity exist, in many countries, costs to access these services are prohibitive (Zambrano & Seward 2010, p.34). Furthermore, some political regimes are known to suppress phone and internet connectivity if desired (Zambrano & Seward 2010, p.34). Further to these political barriers to new media usage, it is common practice in many countries to share a phone within the family or even larger community. The question of access and ownership is also especially relevant from gender and literacy standpoints (Spurk; Wagner; Hattotuwa): who may own a phone and who has the skills to use it, is often culturally defined. Related to the issue of literacy is the problem of (local) languages being used (Hattotuwa): most mobile phones work quicker and easier if not exclusively with the Roman alphabet. Translations into and from local dialects are often done manually and add to the costs of data collection. In any new media project, phone access must not be confused with phone ownership (Hattotuwa). A commonly owned mobile phone may not be the ideal method to obtain personal or sensitive information from an individual.

Unsuitable hardware: Some difficulties for new media use are directly linked to its technology component: the battery of the device must last sufficiently long, its body must resist adverse climate conditions (e.g. be shock-resistant or water-proof) and be adapted to the requirements

⁶ Other "completely wrong assumptions about technology use" (<http://irevolution.net/2011/06/26/wrong-assumptions-tech/>) include the myth that reading and zooming in and out of google maps or Ushahidi maps is intuitive.

of the data gathering process: the display must be sufficiently large so people can read and write comfortably; lighting must be sufficient to work in dark environments; the keypad must be easy to be operated. Some surveys have experienced drawbacks due to the device chosen for data gathering. Mobile phones in general may only be used for short surveys due to the small screen and keypad size. Devices must be carefully selected according to purpose and location. In any case, technology must be locally accepted, by all users (Hattotuwa).

Challenges to data quality: Among the potential benefits of using new media for data collection are the improvements in speed and accuracy. However, many obstacles exist regarding the quality of data gathered through new media. Just like in analogous data gathering, it must be ensured that the data is reliable, verifiable, representative and valid (Arcand; Holmlund; Rummel-Shapiro). In peacebuilding contexts, it is often particularly difficult to verify specific information (Stauffacher et al. 2011, p.20), even with the help of data triangulation methods. It must however be acknowledged that "even a biased source may have important information and a trusted source may provide a mistaken analysis" (Scheers 2008, p.20), so data whose validity and veracity may not be proved, may still be helpful information. What needs to be avoided however is the phenomenon of "elite capture" which occurs due to the fact that often the urban, younger and wealthier population stratum is more often using new media to transmit information (Stauffacher et al. 2011, p.24; Zambrano&Kahl; Rieger; Interpeace) – in most cases there is an "inverse relationship between aid recipients and phone users" (Smith et al. 2011, p. 53). These data quality concerns are especially valid for direct reporting but apply also for digital surveys.

Data protection and security issues: A further concern is the question of ensuring that the gathered data is stored and transmitted in a safe manner. There are various software solutions such as encrypted systems and cloud computing that may increase data protection. However, what about the protection and security of the sources, i.e. the persons providing information? Often, information in crisis and conflict contexts is sensitive and may put the people sharing it at risk if they are identified. In fact, **security issues** have been considered the single most important challenge (Meier&Leaning 2009, p.4; Hattotuwa) that must still be overcome if new media is to represent a qualitative improvement over traditional methods. These security lessons have been learned, for example, in Haiti, where orphans disclosed their location (Nelson&Sigal 2011, p.18) and were consequently taken away. In other countries, reprisal measures against phone holders suspect of "leaking" information were taken by the government, the police or even community members.

Data overflow: An issue ranking for many aid organisations right after these security issues is their concern of being exposed to too large amounts of data when using new media channels. While it is certainly desirable to obtain as much information as detailed and often as possible, this creates a capacity problem in analysing these data and extracting meaningful information from them (cf. Heinzelman et al. 2011, Stauffacher et al. 2011, p.6; Himelfarb 2010; Arcand; Holmlund). First experiences, for example, in the Haiti earthquake operations have however shown that fears to be overwhelmed by incoming information are unfounded (Smith et al. 2011). What is clearly a challenge for these organisations, is to separate useful information from large amounts of "noise" (Stauffacher et al. 2011, p.21). Smith, Macauslan, Butters and Trommé conclude that "potential gains in terms of speed of response gains are still limited by the sector's ability to act on information in a timely way" (Smith et al. 2011, p. xi). There is a constant need for improving social media tools, enabling the gathering of more relevant data and managing it in more effective data management systems (Smith et al. 2011, p. xii).

Assessment fatigue: The flip side of the coin of increasing frequency and intensity of surveys concerns the beneficiaries and may trigger what is often called “beneficiary- or assessment fatigue” (Hattotuwa; Wagner). It is hence crucial to ask the right amount of questions with the right depth in the right intervals of time. Practitioners must learn lessons from pilot projects: In the impact evaluation of an *mhealth* project in Kenya, it was found that weekly reminders to take medication increased adherence while daily reminders did not. A World Bank project in Afghanistan found that 7-8 questions was the maximum number that people would be willing to answer over text.

Monitoring the monitors: Many of these difficulties and challenges can be avoided by gathering information through aid workers, rather than directly through project beneficiaries and affected populations. While this implies that not the whole potential of new media may be reaped (e.g., the question of access to conflict zones then remains), problems such as literacy and security of the end device users do not apply to the same extent (Smith et al. 2011, p. 28). It must be noted however, that aid workers in charge of data collection, despite often having some prior experiences in censuses or other surveys (Arcand), require training in using these technologies, too (Himelfarb 2010) and may also feel insecure working with new media in conflict contexts (cf. Smith et al. 2011). “Monitoring of the monitors” becomes necessary when aid workers have incentives and possibilities to cheat: staff in low income areas might use their mobile phone or airtime for private purposes or e.g. report inaccurate data in order to avoid extra work (Arcand; Wagner).

Ethical issues: Regardless of whether beneficiaries enter data directly or provide it to an aid worker transmitting it over his/her mobile device, ethical issues arise when beneficiaries have the impression of providing information but not receiving any response or requested assistance in return (Stauffacher et al. 2011, p.6).⁷ Further ethical concerns need to be considered when planning the practical implementation of digital data gathering: People providing information should neither have to pay for their reporting (and hence be deterred), nor on the other hand be paid for their efforts (and thereby incentivised to report incorrect information (Hattotuwa; Wagner). Where mobile devices are handed to some beneficiaries but not others, or even where aid workers are seen in a refugee camp endowed with a GPS-enabled smartphone, this may create unprecedented, secondary effects in the population. Yet another issue may arise when participants are required to give certain devices back after use but are accustomed to keeping what they were given or being remunerated for their efforts.

3.3 Recapitulation and prospects of using new media for M&E

While many organisations are aware of the potential to use new media for their M&E to obtain “better answers to more specific questions” (Church/ Life&Peace Institute 2008, p.5), most are still hesitant if not skeptical and also possibly deterred by the high costs of adoption and the lack of published experiences and lessons learned. Only few international organisations and NGOs have staff who champion the adoption of new media and technologies; thus, examples are developed on a rather *ad hoc* basis.

⁷ This important lesson may be learned from the experiences in Haiti, where the disaster-affected population had communicated their needs over various channels but eventually became frustrated when after long periods of waiting these were still unmet and any reaction or response to the information they had given, failed to materialise (Nelson&Sigal 2011, p. 9). This phenomenon has been named “parasitical” (digital development debates), in the sense that information is extracted from victims without returning them aid or visible improvements to their situation.

This section presents some general lessons and recommendations for the use of new media for M&E, drawn from the available literature and the case studies presented in the Annexes. They comprise practical, operational and more policy-oriented suggestions:

- There is a clear need for investment in infrastructures. International support can help governments “wire the last mile” (Meier&Leaning 2009, p.6) and technologies developed to provide electricity (such as solar panel or wind-up, bicycle or wind chargers, cf. Meier&Leaning 2009, p.7) may benefit populations (and aid workers!) all over the globe.
- Adequate planning is crucial. M&E should be factored into all operations from the beginning (Scheers 2008, p.24) but procedures should be tailored at all times to situations and circumstances. Planning should be done in cooperation with local partners who know about the specific context (e.g. local researchers, Arsenault et al. 2011, p.22; Hattotuwa). This also includes the principle of using existing tools rather than developing new ones and incrementally developing what has proved to work locally instead of trialing brand-new and untested technology in a fast-onset crisis or disaster (Smith et al. 2011, p. xi).
- Staff must undergo training and be familiarised with the new technologies (Smith et al. 2011, p.64); initial experiences show that this is a process that requires more time and human resources than usually estimated. It is not enough to give data collectors a device and assume they will use it.
- International actors should always seek to work in partnerships, with universities (for their research skills), other IOs and NGOs (for their expertise and local knowledge) but also the Volunteer Technology Communities (VTC). This is especially true at the field level and for cross-sectoral cooperation with the development and humanitarian sector (Smith et al. 2011, p. xiv). Strong counterproductive effects have been registered where organisations use new technologies in isolation (ICT4Peace 2010; Nelson&Sigal 2011, p.20; Heinzelman et al. 2011; Stauffacher et al. 2011, p.10).
- The peacebuilding community should consider developing common standards such as the SPHERE Standard for humanitarians (Smith et al. 2011, p.69; Church/ Life&Peace Institute 2008, p.5). Codes of conduct or technical and ethical standards for data management (including sanctions, cf. Arcand; Wagner) may be developed (Heinzelman et al., 2011; cf. Blum 2011, p. 7 “strengthening norms”) and peer reviews of operational practices and evaluations conducted (Church/ Life&Peace Institute 2008, p.6).
- On the operational level, tools must be tailored to the end user; it is hence important to distinguish between devices used by trained staff and devices owned by or distributed to beneficiaries. Wherever possible, existing “offline” approaches should be integrated with the new “online” tools since the gap between old and new media diminishes through hybridisation (Brinkman). Regarding processes, most interview partners agreed that it is worthwhile to first conduct a smaller scale pilot project and then scale up systematically (Zambrano & Seward 2010, p.37). However, the step from the first to the second phase requires senior level leadership and some degree of risk-accepting behavior that may not be taken for granted.

4. Peacebuilding M&E and the potential of new media

For a field such as peacebuilding, not yet entirely sure about what its exact function is and who “belongs” in it, it is difficult to propose general ways to improve its M&E and it is even more difficult to formally assess the potential of new media for this purpose. Furthermore, this article is biased as it assumes that there is no real alternative to new media, no way to completely avoid adoption and use of new technologies for peacebuilding. New technologies are spreading so fast to all regions, including underdeveloped and crisis-affected contexts, that the peacebuilding community cannot afford to be the only ones “left behind in the dark” (BBC Media Action 2012) and not knowing how to work new media. As most of the experts interviewed for this project have stated, there is large potential in new technologies for peacebuilding – however, these must be critically assessed.

In considering the information given in this article and the cases presented in the Annexes, four issues arise that are crucial for any peacebuilding actor to work on before and during the adoption of new media:

Acknowledging new media as tools, not solutions

Currently, not just the hope for new media to improve their work is increasing among International Organisations, but also the budgets to “somehow integrate new media” into their work. It is hence essential to understand that new media are not *as per se* the solution to any given problem. They do not have any intrinsic value for either peacebuilding or M&E.

New media must be regarded as what they are: tools that may help overcome “practical obstacles” (Menkhaus 2004) and improve speed and affordability of data gathering e.g. for real-time evaluations (Menkhaus 2004, p.0). However, the time- and cost-saving aspect should not be overestimated since peacebuilding work is done with the most vulnerable and remote groups of people, and reaching out to them requires investment of time, staff and resources. It has been emphasized repeatedly in the interviews and other sources consulted for this paper that peacebuilding tools and actions need to be tailored to the respective context and this inevitably raises costs.

It is further important to note what Currión rightly emphasizes: “Political problems cannot be solved by technological solutions, and at root most problems in ICT4Peace [sic!] are political in one way or another” (Currión/ Stauffacher et al. 2011, p.4). This sends us back to where we started: to a list of systemic and structural issues of M&E of peacebuilding that need to be tackled in non-technical manners.

Aiming at “failing forward” while “doing no harm”

While organisations are encouraged to become “ICT-literate”, experiment with new media, run pilot projects and learn, if necessary through trial-and-error, it must not be forgotten that the field is not a laboratory and just because interventions are “digital”, this does not mean that they may not have consequences (Hattotuwa). In Peacebuilding, where stakes are high, it is critical to truly learn from the mistakes that have been made in order to avoid future harm (Kawano-Chiu 2011, p. 18).

On the other hand, it must also be recognised that improving the M&E and performance of any organisation will always be work in progress and mistakes are not always avoidable. However, it is avoidable to not learn from them. After all, the idea of gathering data in the form of direct reporting from affected populations is motivated by the desire for increased accountability. Peacebuilders are accountable to both their donors and their beneficiaries (Smith et al. 2011,

p.47), and accountability to beneficiaries is motivated above all by the idea that organisations learn how to improve their work through giving beneficiaries a voice (ALNAP 2008, p.14). With respect to new media, giving beneficiaries a voice means that even remote and conflict-affected populations can be producers instead of only consumers of relevant information (USIP 2011, p.4; Bott et al. 2012, p. 11).

Refining organisational culture and structures

Peacebuilding actors need to be willing and ready for some internal changes when using new media for their M&E. First of all, using new media for M&E of peacebuilding requires some changes in organisational culture: The work cycle and evaluation processes of any organisation using new media for data collection, monitoring and evaluation must be redesigned. The role, format and importance of evaluations must be reconsidered internally and ways must be found to reach the structural goals of M&E of peacebuilding.

This stance requires the appreciation that evaluations are interventions themselves and should be treated as such (OECD 2007; Scheers 2008, p.23). For these processes to take place, it is important to have skilled and motivated staff. Peacebuilding actors, who lack e.g. an e-learning platform and whose employees do not communicate over text messaging and Skype or share their good practices over an internal wiki, will have troubles championing new media projects in the field.

Cooperation among organisations

While it is true that each organisation has their own constellation of media-embracing vs. ICT-reluctant staff and their own ideas and convictions on what should be tried out and how, experts agree that a lot of gains lie in better cooperation among organisations.

The way in which the current system of donors, proposals and projects is designed constitutes an obstacle in itself that oftentimes discourages rather than fosters cooperation (Blum 2011, p.5). Many organisations fear losing funding opportunities to their competitors if they share their good practices. Here, again, without a shift in organisational culture towards the recognition that transparency and sharing is needed in order for the field as such to evolve, progress will be limited. However, an increasing number of organisations try to give a good example by uploading their evaluations on the web (Church/ Life&Peace Institute 2008, p.5; Heinzelman et al., 2011) and discussing them openly in public fora.

Throughout this paper, it has been stated that cross-sectoral learning from the development and humanitarian communities is important (Blum 2011, p.13; cf. Ellis et al. 2011), especially where they are more advanced in terms of their evaluation and new media practices. Much inspiration and lessons learned may be found; however, it is important to remember that tools must not be transferred without adaptation. Meier & Leaning state explicitly that "communication technologies for disaster zones are not designed for conflict environments" (2009, p.10; cf. Heinzelman et al., 2011); the same applies to very different conflict environments.

Box 2: Recommendations for peacebuilding M&E to realise the potential of new media

Acknowledging new media as tools, not solutions

- Problem-solving should always start with the problem and not with the tools, as sophisticated or cutting-edge they may seem (Blum). Peacebuilders should first identify what exactly they need to tackle and then develop solutions, utilising specific tools as they are available or may be easily developed.

- More generally speaking, unrealistic expectations of what the new media may achieve must be avoided. Expectations regarding what is credible evidence have risen over the past years (Blum 2012), but we need to reconsider from time to time whether these expectations are realistic, also given the project goals and time frames. Having realistic expectations is important for peacebuilders internally and also for their communication to donors and the public (Chigas&Woodrow/ Life&Peace Institute 2008, p.20; Arsenault et al. 2011, p.13).

Aiming at “failing forward” while “doing no harm”

- Social media may be an apt tool to demonstrate “presence” in areas where it is not possible to be physically close (Wagner; Holmlund). On the other hand, some pilot projects have found that for the reporting of certain issues such as gender based violence, new media are simply not apt (cf. Smith et al. 2011, p.28).
- Peacebuilding work is primarily about human beings and the improvement of their living conditions; therefore, human intuition and feelings should be relied on at least as much as new media.
- New media should always ensure not to substitute traditional information channels (Stauffacher et al. 2011, p.5) such as face-to-face communication (Smith et al. 2011, p.27). Ideally, there should be no choice of using new media or traditional tools, but one would complement the other.

Refining organisational culture and structures

- All project proposals should include M&E components. Projects should always be begun with conflict and needs assessments (Kawano-Chiu 2011, p.16). Evaluations should be designed in ways that allow for both accountability and learning.
- Peacebuilding staff must not only be trained in using new media but should be encouraged to engage in reflective thinking (Kawano-Chiu 2011, p.23). This should also be reflected in the organisation's hiring practices (ibid.).
- New media should be integrated not only in the interface of aid workers and beneficiaries but at all levels within the organisation, including local and headquarter staff (Bott et al., 2012, p.21).
- Changes necessary within an organisation to accompany the introduction of new technologies should not be underestimated. Staff need to be trained, routines changed or optimised (Smith et al. 2011, p.50) – new technologies never “just” replace or complement existing tools; they have a disruptive effect on earlier ways how work was done (Hattotuwa).

Cooperation among organisations

- Especially the more systemic problems of peacebuilding should be attempted to be resolved through a “field-wide-conversation”, via meetings, exchange and partnerships as well as the peer-review of evaluation efforts (Kawano-Chiu 2011).
- Organisations might consider working and exchanging more closely with existing evaluators' associations, such as the International Development Evaluation Association (IDEAS) (cf. Blum 2011, p.6; Church/ Life&Peace Institute 2008, p.6), to find out whether peacebuilders can use new media tools just like practitioners from other fields are doing or in how far they need to be adapted (Nashat). Apart from the idea of collaboration among IOs and NGOs, cooperation and dialogue should be strengthened between the peacebuilding and the technology community (Smith et al. 2011, p.43). There is an increasing recognition that technology providers, too, are responsible to monitor the effects and impacts of the tools they are developing.

Conclusion: Further research and practice needs

One goal of this paper was to open up the topic of new media use for Peacebuilding M&E as a new area of research. More research on this evolving topic needs to be conducted and the findings shared with all stakeholders, including from peer fields. An apt format for sharing evaluations, experiences and lessons learned is provided by the new media: web platforms, blogs, tweets, videos, podcasts and online events have to be added to the current system of internal reports and paper files that are more difficult to share.

Further research may want to look specifically at the “broken feedback loop” and whether applying new media in communicating with beneficiaries and engaging them in project monitoring may really succeed in closing it. Another direction of research might be to analyse current attempts of overcoming the existing dysfunctions of the M&E system or to engage in more in-depth case studies compared to the cursory overview provided in the Annex. Does the exposure of donors to direct beneficiary feedback result in new incentives for agencies' and NGOs' M&E?

Concrete next steps for practitioners could include the following:

- Expand data gathering to two-way communication with affected populations. Obtaining information from project beneficiaries is not sufficient but can be even counter-productive if it is not acted upon. Rather than reacting *ad hoc* to specific data, beneficiary feedback should be systematically fed back into the evaluation process of an organisation's work. Communication efforts such as sending out “peace SMS”, and monitoring tasks such as SMS surveys, should be more closely integrated.
- Besides showcasing success stories of new media, unveil and discuss the fallacies of new technologies. Practitioners' ICT4D and technology blogs are good spots to discover frank accounts and critical remarks, from which ideas for project improvement may be extracted.
- Establish clarity of terminology by distinguishing between evaluations of new media and evaluations *through* new media, and between digital surveys and direct reporting.
- Develop common terminology across sectors. The fields of humanitarian, development and peacebuilders' practices are practically interlinked and overlap to an important extent. Research regarding new media use in all of these realms would highly benefit from a common terminology. The term “ICT4D” has been well established in the development and technology communities already. It highlights the link between technology used for a specific purpose (media) and “development” goals in a broad sense, that might also be understood as comprising humanitarian and peacebuilding activities.
- Scrutinise where new technologies and digital devices are coming from and do not accept them as given. The community should not cease to discuss questions such as the digital divide it is potentially increasing as well as other ethical issues drawn to their attention, such as the environmental friendliness of huge numbers of throw-away cell phones or the conditions of obtaining materials and of manufacturing cell phones.
- Improve the formats and goals of evaluations to establish evidence bases for decision-making that go beyond anecdotes or traditional practice, without however “over-evaluating”. “Evaluation” may be seen as less a formal process but rather a reflective attitude, based on values like participation, trust, quality and learning (Interpeace). Evaluations should hence be less understood as “writing reports” but more as an “organisational tool for effectiveness” and “knowledge-generation processes”, enabling learning within and among organisations (Nashat).

Annexes

The Annexes provide an overview of some of the case studies and examples that were consulted for the development of the research paper. It should be regarded as a start of a list of projects rather than an inventory of existing practice. Most of the examples are drawn from humanitarian or development projects that are related to or could be adapted to more specific peacebuilding activities. Some case studies were found in documents, others obtained through interviews. For all of the below it is important to keep in mind that most cases represent the *status quo* of a given project as of February-May 2012. Some information may be outdated already or slightly biased where technology providers have a vested interest in presenting their "products" as successes (Stauffacher et al. 2011, p.42). This section includes 5 Annexes.

Annex 1: Glossary

Annex 2: New Media in the humanitarian and development community

Annex 3: Benefits and challenges of using new media for evaluation

Annex 4: Case studies

Annex 5: Best practice of new media use in peacebuilding projects

Annex 1: Glossary

Cloud computing	Saving data not on individual devices but on the web.
Crowdsourcing	<i>Outsourcing</i> specific tasks (such as crisis reporting) to an undefined public, a <i>crowd</i> . Helena Puig from UNDP says on her blog: “Crowdsourced data is an excellent, fast way of letting responders know where and about what they should be asking further questions. It cannot provide any answers, it just points you in the direction of further inquiry”. She indicates that <i>crowdfeeding</i> , i.e. playing the information back to the crowd, is a worthwhile idea, since locals are often the more important early responders. https://letthemtalkdotorg.wordpress.com/2012/04/16/crowdfeeding-and-early-response/
Evaluation	An evaluation is a systematic assessment of an ongoing or completed project at specific moments of the project cycle (summative vs. formative evaluation). It aims at finding out whether the objectives were achieved, i.e. it compares the actual project impacts with the strategic plans. Baseline studies are also sometimes considered evaluations, in this case of the status quo before a given project is implemented (cf. Arsenault et al. 2011, p.16).
Failing forward	The idea behind this concept is to learn from mistakes made and improve current and future action, so that in hindsight every failure was “worth it”. Events such as “fail fairs” or publications such as Engineers Without Borders’ “Failure Reports” may help establish this culture (http://legacy.ewb.ca/en/whoweare/accountable/failure.html).
Inconclusive data	An example of the problem of inconclusive data in this respect would be where one school is built but out of that “infrastructure”, two or three schools are generated, i.e. for children and adults, with classes in the morning and classes at night, cf. USAID 2006, p.15). How many schools should be counted in this case?
Log frames	Logical frameworks are tools for planning and management of development and peacebuilding projects. Structured like a table, a log frame is a widely used model of presenting key information about a project in a clear and systematic way.
Monitoring	Monitoring refers to the systematic and regular collection of data while a project is being implemented. The purpose of monitoring is threefold: learning from the data collected whether the project is achieving the intended goals, being accountable for the project implementation and making decisions on adjustments that may have to be made to the ongoing project.
New Media	New media in this paper covers the concepts of digital, social, participatory and mobile media, each of which are labels emphasizing specific qualities. New media allow for the real-time generation and accessibility of content of diverse formats (including video, photo, audio and text), stored and distributed <i>digitally</i> (using Internet or cellular technologies

	such as 3G) on mobile devices (Meier&Leaning 2009, p.6). The new media are <i>social</i> in as far as they allow for an interactive and exchange-oriented process (USIP 2011a, p.6) and the formation of a link or community between generators and receivers of content. This is the basis for collaboration (such as wikis) or crowdsourcing. They are <i>participatory</i> in as far as they allow for not just one-on-one or one-to-many but many-to-many communication. And they are <i>new</i> in as far as they are opposed to traditional media. "New media" is hence a relative definition, applicable and necessary to update given the latest technologies at any given time. The trend in digital devices is towards <i>mobile</i> media as compared to Personal Computers or stationary devices (Hattotuwa).
New technologies vs. New media	Technology is understood here as hardware, software and tools (e.g. a software enabling mass texting for mobile phones), while media is technology use for a specific purpose (e.g. analysing SMS texts for monitoring).
Peacebuilding Evaluation	Church defines peacebuilding evaluation as "the use of social science data collection methods to investigate the <i>quality</i> and <i>value</i> of interventions which seek to stop violence from re-igniting or promote a positive change in the conflict context" (Life&Peace Institute 2008, p.3). She also proposes the following definition: "the use of social science data collection methods (including participatory processes) to investigate the quality and value [in OECD language: the merit and worth] of programming that addresses the core driving factors and actors of violent conflict or supports the driving factors and actors of peace" (Scharbatke-Church, 2011).
PME&L	Planning, monitoring, evaluation and learning (Calvo/ Life&Peace Institute 2008, p.25; Fischer 2009, p.92).
Relationship between Monitoring and Evaluation	Evaluations build on the data obtained during the monitoring of a project (usually focusing on certain indicators) and combine these with information external to the project (cf. Scheers 2008, p.23). Thus, monitoring is an essential precondition to any evaluation.
Social media	Cf. new media
Twitcident	Twitcident is a web-based filtering system that extracts crisis information from Twitter in real-time to support emergency response efforts. (http://twitcident.com , http://irevolution.net/2012/04/15/twitcident/)
Twitmobile	Subscribers of Twitmobile can receive tweets on their mobile phones instead of using the internet (http://www.cdacnetwork.org/public/content/twitmobil)
Ushahidi	Ushahidi is probably the most famous example of crisis mapping based on crowdsourcing. Initially developed to collect eye-witness reports of violence after the presidential elections in Kenya 2007, it has served in Haiti after the 2010 earthquake as an important platform for "information collection, visualisation and interactive mapping" and is currently used in different crisis situations all over the world. Multiple channels, such as email, SMS, twitter and web sources are integrated (www.usshahidi.com).

Annex 2: New Media in the humanitarian & development community

Examples of new technology

Not all best practices from humanitarian and development sectors may be presented here. For a list of the best-known practices of the use of new technologies and new media in humanitarian and development contexts, see e.g. Zambrano & Seward 2010. Examples include:

- The IFRC enabled a call center, free phone number and sent out SMS for beneficiary communication in the aftermath of the **Haiti earthquake 2010** (Chazaly 2011).
- UNDP sends out SMS to warn about floods or cyclones in Bangladesh (USIP 2011a, p. 12), hence using SMS as an **early warning system**.
- **Mobile money transfers** can be made in several countries over the cell phone. The most prominent example is **M-Pesa** which was developed in Kenya and spread out e.g. to Tanzania and Afghanistan. Users pay their bills and send remittances that way.
- Another field of application of new media is in **agriculture projects**, where farmers are informed about crop prices over their phone, enabling them to get better prices. <http://www.cdacnetwork.org/public/content/frontline-sms-pastoralists-check-stock-prices-their-mobiles>

Best Practices from the Humanitarian Sector: Innovation, Lesson Learning and Partnerships

- The **Humanitarian Innovation Fund** supports organisations to “develop, test and share new technologies, products and processes that will make humanitarian aid more effective and cost-efficient in the future.” Funds have been given among others to the Danish Refugee Council, UNICEF and Internews, to support diverse projects aiming at increasing transparency, accountability and data collection through new media channels. A similar fund could be set up for Peacebuilders to foster innovative practices. <http://www.humanitarianinnovation.org/>
- The **Humanitarian Genome 1.0** was developed by the University of Groningen as “an open-source technology to develop a cloud-based search engine for evaluation and lessons learned data”. <http://www.humanitarianinnovation.org/projects/large-grants/groningen>
- The **Digital Humanitarian** is a “network of networks”, linking professional humanitarian organisations and the V&TC (volunteer and technology communities). <http://digitalhumanitarians.com>.

Technology for data gathering and different evaluation formats

The most prominent technology tools currently used in the humanitarian and development realms to gather data using mobile phones include:

- Frontline SMS, <http://www.frontlinesms.com/>
- Rapid SMS, <http://www.rapidsms.org/>
- Episurveyor, <http://www.episurveyor.org>
- Open Data Kit, <http://opendatakit.org/>
- Kobo Toolbox, <http://www.kobotoolbox.org/>

Many of these tools automatically contain a monitoring function since they aggregate the collected data and allow visualisation of the survey results, e.g. the response rate to a given number of SMS that has been sent or the number of surveys actually taken, ordered by region or gender of the respondents (Wagner; White). However, most organisations do not as yet fully realise the potential of these analysis and evaluation mechanisms. Moreover, different models of assessments and evaluations exist, including evaluation of new media use or project evaluation *through* new media use:

- a) The **Global Network for Disaster Reduction** has undertaken SMS-based surveys to determine people's perceptions of progress in Disaster Reduction in various countries around the world. These surveys are intended to complement 'Views from the Frontline 2011' face-to-face surveys.
- Technology: Tختهagle
 - <http://www.globalnetwork-dr.org/txts-frn-the-frntline.html>
 - <http://www.guardian.co.uk/global-development/poverty-matters/2011/may/10/un-disaster-reduction-keeping-customers-satisfied>
- b) In Haiti, **Internews** analysed SMS sent to "News You Can Use" to supplement the data they gathered in interviews and focus groups about the information needs of beneficiaries (O'Halloran nn., p.4). They also conducted an evaluation of new media *through* new media: In the Dadaab refugee camp, a communications needs assessment was undertaken using smartphones. It was found that "more than 70% of newly arrived refugees said they lacked information on how to register for aid". They further found mobile phones to be a good "tool for ongoing monitoring and quality control of field research activities".
- Technology: EpiSurveyor, OpenDataKit
 - <http://www.cdacnetwork.org/public/resource/internews-communication-needs-assessment-using-smartphones-dadaab-kenya>
- c) At the example of the **mobile health (mhealth)** sector, two basic forms of communication may be distinguished, namely one-way communication in cases where reminders are sent out and recipients' reactions are monitored (e.g. intake of medicine), versus two-way-communication requiring participants to actively give feedback or report incidents.
- The **World Bank** is conducting **evaluations of mhealth projects** in Africa. In Kenya, they investigated in a randomised control trial whether text message reminders over mobile phones improved adherence to antiretroviral treatment (Pop-Eleches et al., 2011).
 - Similarly, the **Graduate Institute of International and Development Studies**, Geneva is conducting an **impact evaluation** in Senegal, employing SMS technology to remind people living with HIV/AIDS to take their medicine and come to scheduled appointments.
 - **Health Unbound** (HUB) is an "interactive network and online knowledge resource center for the mobile health (mHealth) community". Their website <http://healthunbound.org> features various examples of organisations and programs.

Annex 3: Benefits and challenges of using new media for evaluation

Benefit: Enhancing the speed of data collection

Since 2009, the Vulnerability Analysis and Mapping branch (VAM) of the World Food Program has used PDA, GPS and mobile phones for their food security monitoring and analysis system. They conclude: "this has enhanced the speed at which data is made available and greatly improved the quality of the data collected." They are saving costs for paper, toner cartridges and data entry clerks transcribing the information manually into databases. Internally, they have created a VAM online discussion forum where training material can be found and discussion and exchanges of experiences take place.

- Technology: PDAs, tablets, GPS, XForms
- <http://www.dlnap.org/pool/files/wfp.pdf>
- <http://www.youtube.com/watch?v=3AJ6XtToNeo>,
http://wiki.rhok.org/Vulnerability_and_Mapping_field_survey_tool_rework

Challenge: Which format for household surveys?

a) In their "Listening to LAC" (L2L) project, the World Bank has found that in mobile phone SMS surveys a maximum of 10 questions may be asked at once, but more ideal are seven to eight questions. In their pilot project, they are testing whether data collection over cell phones is viable and statistically reliable. They are conducting household surveys in two countries of the Latin America and Caribbean region (LAC), focusing on the sectors of food, labor, education and health. Their surveys are conducted in a statistically rigorous manner and financial incentives are given to the participants. Preliminary findings include a recommended maximum number of questions that may be posed in a SMS surveys and that the propensity to answer using cell phones is larger among the wealthier population segments than the poorer strata. First contacts are established over 20 minute face-to-face interviews and in addition to SMS, two other survey channels are piloted: a computer assisted telephone interview conducted by local staff and an Interactive Voice Recognition system, in which a machine is conducting the calls.

- Technology: SMS, CATI (computer assisted telephone interview), IVR (Interactive Voice Recognition)

b) SMS surveys imply working with very limited text lengths. In Haiti, there have been misunderstandings due to the short message length of SMS (Nelson&Sigal 2011, p.22). In data gathering in fragile and complex contexts, it is hence primordial to ask the right questions in the right manner in appropriate moments (Ellis et al., 2011, p.4). This includes having them well thought-out and formulated (Spurk). For these purposes, it may be worthwhile for the peacebuilding community to cooperate with academia.

Challenge: Community effects of disruptive technology

Researchers found that in a new media survey project in Zimbabwe, there was "general suspicion and unwillingness of people to be interviewed without a financial reward". Some participants "were disgruntled by the fact they could not keep the phones or receive remuneration beyond the 120 USD in allowances."

Since the environment in Zimbabwe is highly politicised, "any gathering of information is often viewed with suspicion. In some areas tensions made it difficult or impossible to approach respondents; a few participants resorted to using paper and pen for the questioning and transferred the answers to the phones once they got home."

The organisation in question had to set up a "legal backup in case of arrests" and recommend to "carefully consider mitigation of tensions that can arise from giving people a tool they cannot afford themselves. This is particularly true in areas where people are used to NGOs handing out items to keep."

- Technology: mobile phones
- <http://www.cdacnetwork.org/public/resource/international-media-support-and-humanitarian-information-facilitation-centre-mapping>

Challenge: The importance of training – and timing

The training of school staff to use messaging to alert UNESCO in case of emergencies in Gaza had to be postponed due to local calendars and ended up being held during the month of Ramadan, with participants weakened by high temperatures and little food intake. Lessons learned include hence the importance of consulting local experts when planning training sessions. The project also found that continuous training must be given to teach people how to write good and clear messages avoiding misunderstandings.

- Technology: mobile phones, SMS
- <http://www.cdacnetwork.org/public/resource/unesco-uses-souktel-online-messaging-system-case-study-sending-sms-emergency-alerts>

Challenge: We succeed to reach out to remote populations – what next?

Voix des Kivus is a *crowdsourcing* project by Columbia University with support from USAID. The pilot project from 2009 included four villages in the South Kivu province of the Congo and was later expanded to 18 villages in 2011. Three persons in each village - the traditional leader, the representative of the women's group and one elected person - were provided mobile phones and monthly credit. They received a list of codes and were asked to report any event happening in their village via SMS, also on behalf of other village members. Messages were automatically filtered according to origin and content and reports were extracted from the database. The pilot project was expanded to a larger number of villages and results show that "obtaining verifiable, high-quality data in real-time from these hard-to-reach areas is not only possible, but needs less expense and oversight than previously thought." Thanks also to good planning and training, there were no large technical or social barriers. However, they conclude "we don't know whether this information will get seriously used [...] many organisations expressed great interest in the concept and the data; but we do not know of any serious reactions from international actors to the messages coming in, including real time reports of attacks and abuses".

- Technology: mobile phones, Frontline SMS
- <http://blog.ushahidi.com/index.php/2011/05/16/voix-des-kivus-a-crowd-seeding-system-in-drc/>
- <http://www.frontlinesms.com/wp-content/uploads/2011/08/Case-Study-Voix-des-Kivus-final.pdf>
- <http://cu-csds.org/projects/event-mapping-in-congo/>
- <http://cu-csds.org/wp-content/uploads/2009/10/Voix-des-Kivus-Leaflet.pdf>

Challenge: Political barriers and adversarial regimes

Cases from various countries and regimes have been reported, in which communications restrictions impeded the use of new tools for the use of beneficiary communication and/or evaluation (cf. Stauffacher et al. 2011, p.14; USIP 2011a, p.4; Hattotuwa). Documented cases include Myanmar/Burma, Thailand, Vietnam, Cambodia and China (USIP 2011a, p. 10), Sudan (Meier&Leaning 2009, p.5), Zimbabwe and Ethiopia (USIP 2011a, p. 6) and during the "Arab Spring".

In many countries, mobile phones may be traced since people have to register with their names and ID (Meier&Leaning 2009, p.6). In Iran, the government was able to find dissidents over their tweets. In the case of "Cuidemos el voto", Mexico, 80% of people used twitter and not free SMS to report electoral fraud (Zambrano&Kahl).

Challenge: Questions of gender and literacy and the consequences for access and ownership of mobile phones

a) Are women allowed to own mobile phones in certain societies? If not, are they granted access to them? Does a male household member control the conversations? (Himelfarb 2010). Cf. the Frontline SMS case study: <http://www.cdacnetwork.org/public/resource/frontlinesms-using-frontlinesms-complaints-and-response-mechanism-aftermath-pakistan-floods>

b) Are phone users literate enough to use the phone and/or use the text messaging function? Do illiterate phone users require assistance by literate users or do mechanisms such as interactive voice response exist (Himelfarb 2010)? Cf. the example of developing a smart phone application enabling texting for illiterate people: <http://www.technologyreview.com/communications/39974/>

Challenge: How to monitor the monitors?

The Haitian NGO Deep Springs International is using Radio Frequency Identification (RFID) tags and mobile phones equipped with Near Field Communication (NFC) to monitor the distribution of chlorine to treat water supplies in Haitian households. Community workers use a specific type of mobile phones with strong batteries (but without "fancy touch-screen interface" in order for it not to be stolen), to scan the RFID tags of the water buckets they have "visited". They have found that families treat their water more regularly if they are visited by the health workers. By requiring the scanning of the RFID tags, it is made sure that health workers actually visit the families. The necessary software for the application, so that outgoing SMS were saved until access to the phone network was restored, has been developed by a local.

- Technology: mobile phones, RFID, NFC
- <http://deepspringsinternational.org/>
- <http://www.scientificamerican.com/article.cfm?id=haiti-cholera-clean-water-chlorine>

Annex 4: Case studies

Case Study: Analysing data produced as a by-product of communication activities

Beneficiaries often deliver more data through their (communication) behaviors than the content they provide voluntarily. A large amount of data ("big data") is created as a by-product of people's daily communication activities ("data exhaust"), from which selected information may be extracted ("Data mining", cf. Zambrano & Seward 2010, p.32). The **UN Global Pulse** was created by the UN Secretary General in 2009 to "explore opportunities for using real-time data to gain a more accurate understanding of population wellbeing, especially related to the impacts of global crises." They are developing an approach to using this real-time data to monitor the impact of shocks and see how populations change their behaviors in response to "slow-onset crises".

- Technology: Data mining
- <http://www.unglobalpulse.org/>
- Link to Peacebuilding: There are a number of **computer models** currently developed to model the outbreak and spread of violent conflict in different countries. Most of them conduct "sentiment analysis" and scan official sources along with data from Facebook and Twitter; they may even analyse phone traffic. <http://www.economist.com/node/21553006>

Case Study: ACTED's Community Vulnerability Surveillance and Drought Preparedness in Uganda

ACTED is currently piloting new technologies in its Community Vulnerability Surveillance (CVS) project (based on Rapid SMS) and its Drought Early Warning System/ Drought preparedness project (EWS, using the Nokia Data Gathering system, with a higher volume of data) in the Karamoja region in North Eastern Uganda. Both projects contribute indirectly to peacebuilding since they protect the livelihood of the Karamojongs and therefore reduce risk of conflicts caused by scarcity of resources and assets.

"In the first project (CVS), we didn't distribute phones but relied on those available among the data collectors or within their surroundings. In the second project (EWS) we provided a more advanced type of phone (Nokia 2710) that, we thought, would build on the motivation of the data collectors (who were of a higher educational level than in the first project)." (Ogwang)

First lessons learned include some of the above-mentioned difficulties:

- In both projects, the percentage of data collectors sending their monthly reports via SMS stabilised at around 30% only. In the CVS project, reasons for this low participation are mostly "due to a poor motivation in reporting but also due to the fact that few data collectors turned out to indeed own the phone they claimed to have, and not all of them were familiar enough with their phones to send a simple text message." (Ogwang)
 - In the EWS project, many phones were lost or damaged and they further had problems with the network and internet registration. The high turnover of data collectors (with untrained newcomers replacing experienced ones), and the data collectors' fear of being identified as forging data (through the GPS functionality of the device) further weakened data collection.
 - What should not be underestimated when planning and implementing a similar project is "the time required to test it and get it work in a sustainable manner (more than a year apparently) and the level of human resources required to (i) monitor, train and retrain the data collectors, (ii) address the challenges and adjust the system where necessary." (Ogwang)
- Technology : mobile phones, Rapid SMS, Nokia Data Gathering System, GPS

Case Study: The REACH mapping tool in Kyrgyzstan

The REACH initiative has been created to “enhance the effectiveness of planning and coordination by aid actors in countries that are in crisis or at-risk of crisis” and to “contribute to filling information gaps before, during and in the aftermath of a crisis”. As such, it is also a relevant mapping tool for peacebuilding operations. The tool is being applied in the Philippines, Libya, Haiti, and other countries, by the NGO ACTED. Kyrgyzstan currently seeks to roll-out to cover the whole country and will soon have a cross-border link with Tajikistan for Disaster Risk Reduction.

In Kyrgyzstan, community-based mapping is being piloted since June 2010, building on the capacities of local and national actors. Initially, satellite imagery was used to identify where the conflict was, and then to follow up where houses were destroyed and shelter rehabilitation was required. Community level focus groups were held to identify security issues to plan peacebuilding and conflict mitigation projects. The project comprises topics as varied as community level mapping of winter pastures (to see where conflicts arise over boundaries of natural resources and produce maps of new boundaries, demarcated with mediators, to improve pasture access for community members), increasing the capacity of local governments to better plan their annual budgets (peacebuilding activities may be better targeted according to conflict probabilities) and early warning systems using mobile phone technologies (these are enabled for two-way communication and include SMS based surveys related to conflict/peace to rapidly collect and map information used to inform policies through Early Warning Networks at the national level).

“We use GPS-enabled cameras and link this through Google Earth for example. We take photos of irrigation canals that are not working, which have led to disputes. We can then go back and take updated photos once we rehabilitate them. We also take photos of houses being reconstructed that were identified after the conflict, and show the progress of their construction as part of a monitoring tool”. (Pakula)

After the end of the emergency phase, they transitioned the platform from an emergency assessment into a planning, monitoring and evaluation tool. Now, socio-economic data from the local government administrative level is included in the database.

ACTED's lessons learned during that transition phase include that

- There were challenges related to language of the tool (it is now available in Russian).
 - They needed to develop an offline tool (based on DVD and USB flash) “so that people with no internet can also access the database and the maps”.
 - A lot of information needed to be given to partners in order for them to “buy in and then to use it for their own purposes”.
- Technology: REACH software, SMS, GPS
- <http://www.reach-initiative.kg/> <http://www.reach-initiative.org>

Annex 5: Best practice of new media use in peacebuilding projects

Sisi ni Amani Kenya

This project takes a “technology-aided approach to peacebuilding” and supports both its core activity areas (“Strengthening Positive Grassroots Civic Engagement & Voice” and “Conflict Early Warning and Response”) through new media. All local chapters use mobile phone-based technologies for peace promotion and to communicate with the local communities. Sisi ni Amani builds upon local knowledge and enables disconnected local peace leaders to create effective local conflict prevention communication systems. They are establishing mechanisms for localised conflict analysis and customised conflict monitoring as well as early warning response systems combining the shared powers of both local communities and new technologies.

Technology: Rapid SMS <http://sisiiniamani.org>

Mobile-assisted dispute resolution

An example of land dispute resolutions done over distance is the Internet Bar Organisation's Internet Silk Road Initiative in Afghanistan. Smart phones are being used to transmit GPS information along with photos of the dispute in question. Data may be transmitted digitally for arbitration.

Technology: GPS, SMS

<http://www.internetsilkroad.org/>; Himelfarb 2010

Experiences from the Uwiano Platform for Peace in Kenya

The Uwiano Platform for Peace was designed to ensure that no violence impeded the Kenyan referendum in August 2010. In addition to the new technologies used, volunteer monitors were sent to hotspots across the country and peace committees were established. People sent alerts of violence through email or a free SMS short code. Incoming messages were placed into six categories: “informative, threat, positive message, hate speech, coded message, or incitement to violence”. These claims were verified by Uwiano team members calling the message senders and other officials in that area. They then forwarded the verified information to security institutions and peace committees to respond accordingly, for example, through mediation. Uwiano received about 20,000 messages (most on the day of the referendum) which allowed them to track and stop 122 incidents before and during the vote.

Technology: email, SMS

<http://www.comminit.com/en/node/323372>,

<http://www.ke.undp.org/index.php/projects/uwiano-peace-platform-project>,

<http://www.undp.org/content/undp/en/home/ourwork/crisispreventionandrecoverysuccessstories/Voting-not-violence-in-kenya.html>

Peacebuildingdata.org

The developers of the Kobo Toolbox have used the data gathering tool they developed and conducted large surveys about peace processes in places such as Liberia, Central African Republic and Uganda. The goal of their website **peacebuildingdata.org** is to “fill in the gaps between peacebuilding work as it is envisioned by policy-makers, and its implementation, reception and perception on the ground”. The results of their “quantitative and qualitative research undertaken in countries affected by mass violence” aim to serve “as a formative monitoring and evaluation system for actors on the ground”.

PeacebuildingData.org displays the research undertaken by its founding members of the Initiative for Vulnerable Populations at UC Berkeley. *“We work to ensure that the needs of survivors are recognised and acted on by governments, UN agencies, and nongovernmental organisations. We help improve the capacity of local organisations to collect and analyse data about survivors and vulnerable populations so that their needs will be heard and their rights can be protected.”* Country studies include Liberia, where a nationwide survey of more than 4000 randomly selected respondents was conducted in 2010 by 50 surveyors using KoboCollect, asking questions on justice, reconstruction, violence, forgiveness, health and other topics. *“This study was undertaken to contribute to a deeper understanding of: (1) the population's priorities for peacebuilding, (2) Liberians' perceptions of their post-war security, and (3) existing disputes and dispute resolution mechanisms.”*

Technology: Kobo Toolbox

<http://www.kobotoolbox.org/about/showcases/building-peace>,

<http://www.peacebuildingdata.org/liberia>,

<http://www.kobotoolbox.org/about/showcases/transitioning-peace>

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Resource persons and interview dates

Jean-Louis Arcand , Professor of International Economics	Graduate Institute, Geneva	20 March 2012
Bernardo Arévalo de León , Deputy Director-General, Research and Development <i>together with</i>	Interpeace	17 April 2012
Koenraad van Brabant , Head of Reflective Practice and Learning		
Amparo Ballivian , Lead Economist Latin America & Caribbean Region	Worldbank	12 April 2012
Andrew Blum , Director of Learning & Evaluation	United States Institute of Peace	27 March 2012
Henk-Jan Brinkman , Chief Policy, Planning and Application Branch	UN PB Support Office	7 March 2012
Sanjana Hattotuwa , Senior Researcher and Special Advisor (ICT4 Peace Foundation)	Centre for Policy Alternatives	10 April 2012
Marcus Holmlund , Impact Evaluation Coordinator	Worldbank	28 March 2012
Anne Kahl , Conflict Prevention Specialist <i>together with</i>	UNDP/ Bureau for Crisis Prevention & Recovery	13 April 2012
Raul Zambrano , Senior ICT Policy Advisor	UNDP	
Melanie Kawano , Program Director	The Alliance for Peacebuilding	28 March 2012
Bidjan Nashat , Strategy Officer	Independent Evaluation Group	19 March 2012
Matthias Rieger , Doctoral candidate in Economics	Graduate Institute, Geneva	2 March 2012
Stefan Rummel-Shapiro , Senior M&E Advisor	UN PB Support Office	1 March 2012
Bahar Salimova , Information Officer	Independent Evaluation Group	3 April 2012
Christoph Spurk , Research coordinator "Media in International Cooperation"	Zurich University of Applied Sciences Winterthur	28 March 2012
Adrien Tomarchio , Communication Manager <i>together with</i>	ACTED	3 April 2012
Byron Pakula , Country Director Kyrgyzstan as well as Malika Ogwang , EWS Specialist Uganda, via e-mail		
Natascha Wagner , Doctoral candidate in Economics	Graduate Institute, Geneva	6 March 2012

About this paper and the author

This paper draws on the review of reports, project websites, blogs, scholarly articles and other documents on M&E of peacebuilding, conflict prevention, humanitarian response and development as far as they are concerned with fragile or conflict-affected settings and/or the use of new technologies. More than a dozen interviews with experts from peacebuilding, evaluation, and media organisations have been conducted from March to April 2012. The case studies, examples and informative anecdotes presented in the Annexes are not a representative sample, but have been selected among a number of activities to illustrate the points made in the present paper, while attempting to achieve a certain balance in terms of geography, sectors and actors.

Sarah Költzow has degrees in Public Management and Development Studies. She worked as a Consultant for the Geneva Peacebuilding Platform, specifically conducting research on opportunities and challenges of using new technologies and social media for the monitoring and evaluation of peacebuilding projects. The author thanks all interviewees listed above that have been contacted for this study for their insights which are an important contribution to this paper. Special thanks go to Raksha Vasudevan and Antonia Does who have helped with editing. Any errors of fact or interpretation are the author's alone.

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About the Geneva Peacebuilding Platform

The Geneva Peacebuilding Platform is an inter-agency network that connects the critical mass of peacebuilding actors, resources, and expertise in Geneva and worldwide. Founded in 2008, the Platform has a mandate to facilitate interaction on peacebuilding between different institutions and sectors, and to advance new knowledge and understanding of peacebuilding issues and contexts. It also plays a creative role in building bridges between International Geneva, the United Nations peacebuilding architecture in New York, and peacebuilding activities in the field. The Platform's network comprises more than 2500 peacebuilding professionals and over 60 institutions working on peacebuilding directly or indirectly. As part of its 2012-2014 Programme, the Platform provides policy-relevant advice and services, ensures the continuous exchange of information through seminars, consultations, and conferences, and facilitates outcome-oriented peacebuilding dialogues in five focus areas. For more information see <http://www.gpplatform.ch>.

The Geneva Peacebuilding Platform is a joint project of four institutions: The Centre on Conflict, Development and Peacebuilding (CCDP) of the Graduate Institute of International and Development Studies; the Geneva Centre for Security Policy (GCSP); Interpeace; and the Quaker United Nations Office, Geneva (QUNO).

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