

Research Application Summary

Assessing usage of Web 2.0 Tools in disseminating climate information and services in National Agricultural Systems of Eastern Africa

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Abstract

Without deliberate attention, the vulnerability to climate change and variability in the sub-Saharan Africa and particularly Eastern Africa region will be severe in terms of food and income insecurity, worsened human and livestock health and environmental degradation. Web 2.0 Tools specifically wikis, blogs and RSS feeds are some of the dissemination channels increasingly being used with a wider reach to target users in National Agricultural Systems (NAS). The users include the extension officers, researchers, postgraduate students, and educators in universities. However, its use is still challenging in the Eastern Africa NAS as internet access and connectivity remains poor, Information Communication Technology (ICT) expertise is inadequate and ICT infrastructure is generally weak. Monitoring and evaluating the use of the NAS operated Web 2.0 Tools is presently a low priority and when done there is no feedback mechanism. The main objective of the study was to enhance the use of Web 2.0 Tools for accessing and disseminating climate information and services by the Eastern Africa NAS in order to improve adaptation to climate change impact. The specific objectives of the study were: to determine the extent of use of Web 2.0 Tools in dissemination of climate information and services by NAS in Eastern Africa; to establish the NAS preferred Web 2.0 Tools for accessing climate information and services in Eastern Africa; to identify user-friendly attributes of Web 2.0 Tools required by the Eastern Africa NAS for disseminating climate information and services; and to determine the feedback mechanisms that the NAS have adopted in their Web 2.0 Tools for disseminating climate information and services and their efficiency in responding to specific needs of the users in NAS.

Key words: Climate change, climate change impact, Eastern Africa, Web 2.0 Tools

Résumé

Sans une attention délibérée, la vulnérabilité au changement climatique et la variabilité dans l'Afrique sub-saharienne et en particulier la région de l'Afrique de l'Est seront sévères en termes de l'insécurité alimentaire et du revenu, aggravé la santé de l'homme et du bétail et la dégradation de l'environnement. Le site Web 2.0, en particulier wikis, les blogs et les flux RSS sont quelques-uns des canaux de diffusion de plus en plus utilisés avec une plus grande portée de cibler utiliser dans le System Agricultural National (NAS). Les utilisateurs sont les agents de vulgarisation, des chercheurs, des étudiants de troisième cycle, et les éducateurs dans les universités. Cependant, son utilisation est toujours difficile dans le NAS Afrique de l'Est comme l'accès à l'Internet et à la connectivité reste pauvre, l'expertise à l'Information de Communication Technologique (ICT) est insuffisante et l'infrastructure des ICT est généralement faible. Le suivi et l'évaluation de l'utilisation de l'outil du Web 2.0 NAS est actuellement une priorité faible et une fois terminer il n'y a pas de mécanisme de rétroaction. L'objectif principal de l'étude était d'améliorer l'utilisation des outils Web 2.0 pour l'accès et la diffusion d'informations climatiques et des services par le NAS Afrique de l'Est afin d'améliorer l'adaptation aux impacts des changements climatiques. Les objectifs spécifiques de l'étude étaient de déterminer l'ampleur de l'utilisation des outils Web 2.0 dans la diffusion de l'information climatique et de services par SAR en Afrique de l'Est, d'établir le NAS préféré des outils Web 2.0 pour l'accès aux informations sur le climat et les services dans l'Est de l'Afrique, à identifier les attributs conviviale des outils Web 2.0 requis par le NAS Afrique de l'Est pour la diffusion de l'information climatique et des services, et de déterminer les mécanismes de rétroaction que le NAS ont adopté dans leurs outils Web 2.0 pour diffuser l'information et des services climatologiques et de leur efficacité à répondre aux besoins spécifiques des utilisateurs de NAS.

Mots clés: Changement climatique, l'impact du changement climatique, l'Afrique orientale, le Web Outils 2.0

Background

Scientific evidence is now overwhelming that global climate is changing at rates that will be detrimental to the wellbeing of people with weak capacity to cope and adapt. Without deliberate attention, the vulnerability to climate change and variability in especially the sub Saharan Africa (SSA) region particularly Eastern Africa, will be severe in terms of food and income insecurity, worsened human and livestock health and environmental change degradation (Eriksen *et al.*, 2008). There

are ongoing climate studies globally, from which climate information and services are being channeled to diverse end-users through a diversity of dissemination channels. One dissemination channel increasingly in use for diverse user in NAS is Web 2.0 Tools, which has rapidly grown from a group work tool for scientists into a global information space with more than a billion users (Grover-Kopec, 2006). Web 2.0 Tools provide a wider reach to target users and could prove beneficial if widely adopted by the NAS institution in Eastern Africa in disseminating climate information and services.

Literature Summary

According to the Fourth Assessment Report of Inter governmental Panel on Climate Change (IPCC), the science of climate change is more apparent. Climate change is happening and is caused in a large measure by human activity (IPCC, 2007). The effects of climate change as a result of accumulation of greenhouse gas emissions (GHGs) include high average air and ocean temperature, changes to seasonality of rainfall and reduced availability of water resources. Impacts associate with these effects include food insecurity (FAO, 2007; Calzadilla *et al.*, 2009), economic insecurity, persistent poverty, vulnerability to shocks and inadequate capacity to cope with those shocks and increase conflicts and migration (Tarhule, 2007). Suggested coping strategies to mitigate and adapt to these climate changes impacts include keeping of variety of livestock species (Köhler-Rollefson, 2009), diversification of income generating activities, water resource management and tree planting activities. Organizations have rushed to explore the numerous opportunities offered by the web to enhance their visibility and improve the outreach of their services. Web 2.0 tools are being used globally to disseminate climate information and service in context of health (Grover-Kopec, 2006) and education (NACSE, 2009).

Study Description

The study adopted internet-based survey and interview-led questionnaire survey. The internet-based survey used datasheet to capture information on Web 2.0 Tools used for disseminating climate information and services from websites operated by Eastern Africa NAS institutions under the study. The websites provided data on Web 2.0 Tools used and feedback mechanisms implemented. The interview-led questionnaire interview survey targeted users in NAS. Data collected were in regard to the user preferred Web 2.0 Tools to access climate information and service and the associated user friendly attributes of each Web 2.0 Tool.

Preliminary Results

Table 1 indicates that 70.4% of the sample respondents do not use Web 2.0 Tools to access climate information and services. This could be due to lack of skills in using Web 2.0 tools. Table 2 shows that 68.1%, of the respondents lack or have limited skills in using Wiki. Of the sampled respondents, 85.1% have not received any kind of training in using the Wiki. This could be an indicator that lack of training in the use of Web 2.0 tools is a major contributing factor towards inadequate skills in using the Web 2.0 tools for disseminating climate information and services hence the usage is low.

Table 1. Use of Web 2.0 tools to access climate change information.

	Frequency	Percent
No	69	67.6
Yes	29	28.4
Total	98	96.1
No response	4	3.9
Total	102	100.0

Table 2. Skills in use of Web 2.0 tools.

	Frequency	Percent
None	50	49.0
Limited	14	13.7
Average	15	14.7
Skilled	9	8.8
Highly skilled	6	5.9
Total	94	92.2
No response	8	7.8
Total	102	100.0

Research Application

These findings of the study can be used to develop training programmes on Web 2.0 tools to build the skills of users. This will enhance use of Web 2.0 Tools for accessing and disseminating climate information and services among the users.

Web 2.0 tools have revolutionised the way people share information on the web and skills in using these tools is important to enhance their use. Sharing climate information and service will improve the adaptive capacity and resilience to the climate change impact in Eastern Africa. Eventually it will lead to food and income security and realization of MDGs One, Six and Seven.

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