

ICUD-0412 Web-based international knowledge exchange tool on urban resilience and climate proofing cities: www.climatescan.nl

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Summary

There is a wide diversity of projects undertaken to address urban resilience and climate proofing in the world. International knowledge exchange tools are evaluated with result: stakeholders demand tools that are interactive, open source and provide more detailed information (location, free photo and film material). This abstract details the outcomes of an interactive web-based map application for international knowledge exchange on 'blue-green' projects around the globe. Climatescan.nl has proven to be a successful tool with over 5000 users and more than 2000 international projects. The tool is used in several international workshops and serves the needs of different stakeholders.

Keywords

climate adaptation, international knowledge exchange, Tools, urban resilience, SUDS, BMPS

Introduction

Collaboration amongst water professionals and other stakeholders for more sustainable water management is essential for international knowledge exchange. International interactive open source tools are used as communication aids to promote engagement with stakeholders in the field of climate change and related environmental issues. The internet has become the de-facto platform to store, filter and translate knowledge into these new formats. Any new information sharing tool must utilise the benefits the internet offers, while at the same time acknowledging and tackling the numerous challenges, one of which is the necessity to respond to user needs and not simply opt for a one-way, supply-driven approach (Hamill et al, 2015). In order to gain the greatest participation by the user, a knowledge sharing system must be both easy to use and also be perceived as being useful (Hall, 2001).

In view of the above, the research group 'spatial transformations' from the Centre of Research & Innovation for Built Environment (Hanze University of Applied Sciences) has been evaluating tools and investigating ways in which information on local climate proofing and adaptation initiatives can best be shared. This abstract describes the recent outcomes: an optimized interactive online map application that provides an easy-to-access database of international project information in the field of urban resilience and climate adaptation. The stages of development of the application will be shortly discussed along with the results and future plans and expectations.

Methods and Materials

Climatescan is originally developed by Hanze University of Applied Sciences to map high flood risk areas. The tool is able to support the tasks of prioritising risks, evaluating flood models, designing

appropriate remedial measures and map several sustainable urban drainage systems (Tipping, 2015). Engagement with stakeholders within EU projects as INXCES and WaterCoG resulted in evaluating climatescan and other tools. Most stakeholders would like to have tools that are (top 5):

- 1 interactive;
- 2 open source;
- 3 provide more detailed information (location, free photo and film material);
- 4 link to scientific research outcomes on SUDS on that specific location;
- 5 local examples and international examples.

Results and Discussion

The www.climatecan.nl application is in continuous development as more data is uploaded and improvements are made to respond to feedback from users. Currently, all the data points are categorised into 20 sub-groups which are each assigned a different color as shown in the legend to the right of the webpage. Most of the categories relate to sustainable urban drainage systems (SUDS) including constructed wetlands, swales, green roofs, permeable pavements and floating structures on public and private property.

The open source website has proven to be helpful not only for practitioners working in this field but also as a useful tool for students, lecturers and researchers. The webtool has been used during international fieldtrips with participants from countries such as Denmark, Australia, UK, Sweden, Norway and USA. A survey among international project partners showed that the ease that projects can be found and viewed is highly advantageous when compared with more traditional data retrieval methods. More than 2000 projects are now listed in the tool (Boogaard, 2017). More than 60% of the users is younger than 34 years and 51% female users resulting in engagement with an important target group: young (female) professionals (Fig. 1).



Fig. 10. Visualization of locations of projects on www.climatecan.nl and user analytics.

Conclusions

In conclusion, the outcomes of this project have shown there is a clear demand for a collaborative, knowledge sharing tool where first impressions of different urban resilience projects can be quickly

gained. The climatescan.nl map application has proven successful to its users (most young professionals) with over 2000 projects and is gaining positive feedback in international workshops and meetings.

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