Adopting ICT-based solutions for lessening the impacts of heatwaves

Dr. Iphigenia Keramitsoglou
Research Director
National Observatory of Athens, Greece
External Expert in WHO for Heat Health Action Planning
Recent Temperature Extremes

Canada 2018

Quebec says up to 70 people may have died in connection with heat wave

Most of the deaths occurred in Montreal, with 34 cases reported to authorities

The Canadian Press · Posted: Jul 09, 2018 7:23 PM ET | Last Updated: July 10, 2018

Health officials have said many of the people who died didn't have air conditioning in their homes and had existing conditions. (Simon-Marc Charron/Radio-Canada)

Japan 2019

Health warnings for tourists as Japan swelters during record heatwave

• More than 460 people were admitted to hospitals for treatment for heatstroke over the weekend
• Japan's Environment Ministry has even launched a campaign encouraging men to carry parasols
The Urban Heat Island Effect

• Cities are warmer than rural areas.
• UHI affects the magnitude and duration of Heatwaves
• Heatwaves are the natural disasters that cause the most fatalities.
Why ICT-based approaches matter?

• ICT: computers, Internet, mobile phones...
• Connect **vast networks** of individuals over **vast geographical areas** and facilitate **fast flows** of information.
• Essential tools for **cooperation and collaboration** and
• provide unprecedented opportunities to **build resilience** and enhance **DRRM**
Sharing best practices
Learn from each other
A tool for Authorities for central management of heat waves and Citizens for personalized heat risk assessment and guidance

EXTREMA offers temperature surveillance and evaluation of heat health risk during the ongoing event

Global relevance, global interest, share experiences

Support Cities to become healthier (Ostrava priority)
1. **City Authorities**

- **Dashboard**
  - Alerts 🔴
  - Cooling centers 🏡
- **Real-time Maps from satellite data**

2. **Citizens**

- **Mobile Application**
  - Personalised risk estimations
  - Advice ☀️
  - Nearby cooling centers

[All the icons are from flaticon.com]
Management of 900 cooling centres
EXTREMA in Google Play & Apple Store
Cool Routes

The EXTREMA Mobile App can provide routing information to the users to help them reach their destination passing through the city’s cooling centres.
Cool Routes in the City via Cooling Centres
Mobile Application
Risk, Profiles, Recommendations

Risque

Vigilance canicule à Paris-Petite Couronne: **Verte** (information valable le 23/06/2019 à 10h)

Consultez la carte et les bulletins de vigilance (vigilance.meteofrance.com)

Recommandations

- Prendre de l’eau avec soi et un brumisateur
- Se couvrir la tête
- Évitez le travail manuel ou l’exercice
- Évitez les boissons alcoolisées ou avec du sucre
- Avant de sortir, veuillez à maintenir votre appartement le plus frais possible

Si vous êtes dehors

- Déplacer vous vers une ombre

Si vous êtes à l’intérieur

- Prendre un réfrigérateur portable ou un bain de glace
Success Story, 2018

Paris: in Top10 software

Athens: #1 Trend in Tools
Targeted Actions

**STAY COOL**
Tap your NFC enabled smartphone to get info about the city and the extreme temperatures

1. Use your WiFi
2. Turn on your NFC connector
3. Tap your phone on the "COOL ATHENS" logo

**خونسرد باش**
کلید کنید تا با تلفن هوشمند خود بتوانید اطلاعات راجع به شهر و حداکثر دما دریافت کنید.
روی NFC کلید و دوباره کلید نکنید.
1. به را روشن کنید.
2. در تلفن کلید کنید.
3. بروی آرام
Additional Features

• **Analytics** – Optimise resources and Help stakeholders plan their network of cooling centres

• **Detailed** Land Surface Temperature map (100m) with hot spots

• **Walking Officers** to Notify Vulnerable Population
Daytime
Surface Temperature Hotspots
City of Milan, Italy
Vice Mayor Myrivili (C. Athens) being interviewed on TV for EXTREMA

Emergency notification system for extreme temperatures

22 June 2019
How Local Governments Can Promote Disaster Risk Management Through Adopting ICT-based Solutions?

The case of lessening the impacts of heatwaves on public health through a mobile application
EXHIBITORS

EXTREMA
EXTREMA is a service for Cities to manage efficiently extreme temperature events. EXTREMA provides a mobile application for citizens and a dashboard for City Authorities. It is implemented in Athens, Paris, Rotterdam, Milan, Lisbon and the Island of Mallorca.

Aratos Systems B.V.
Aratos Systems B.V., member of Aratos Group, is a Dutch SME that is very active in the fields of Space & Satellites, Information & Communication Technology and Homeland Security.

extrema.space
Twitter: @EXTREMA_proj
E: contact@extrema.space