

## Research on climate change and health using eHealth as a tool



A partner driven cooperation project

### **INDONESIA**

# "A cooperation project in its best form"

In January 2013, the Indonesian capital Jakarta suffered the worst flooding in a decade. 50,000 people were evacuated and about 20 people died. Since climate change will lead to even more extreme weather in the future, a Swedish-Indonesian collaboration aims to raise medical preparedness through eHealth.

"Indonesia has problems with torrential rains causing floods and landslides, as well as droughts that create water and food shortages. This primarily affects people who are already vulnerable, such as the elderly, the sick and people living in poverty. Therefore, this is a really important project," says researcher and project manager Maria Nilsson from the Institute of Epidemiology and Global Health at Umeå University.

In 2012, she and a research team from Umeå, started a Sida-funded collaboration with colleagues at the Gadjah Mada University in Yogyakarta, Indonesia. The project focuses on how the health sector can reduce its negative impact on the environment while developing strategies

on how to mitigate the negative effects of climate change on human health.

"It's about reviewing the Swedish and Indonesian health systems' plans for readjustment and adaptation, but also to organize an exercise to test the preparedness for disaster. We have chosen to focus on Gunungkidul, a district with 700,000 inhabitants, a two hours' drive outside Yogyakarta," says Maria Nilsson.

Since Indonesia is a vast country consisting of thousands of islands, the project works with "long distance health care" through IT technology, so-called eHealth.

"We're already working with eHealth in Västerbotten in northern Sweden, where distances



between hospitals and patients also can be long. Amongst other things, eHealth can provide medical specialist consultation via videolink. Using this technology, medical expertise can be accessed immediately across long distances in emergency situations," says Åsa Holmner, who is the eHealth-expert of the research group.

Another objective is to collect information at local level about how human health is affected by climate change. Therefore, the partners are recruiting graduate students from Indonesia in order to create a local research group.

"This will be the first research group in Asia that focuses on climate change and health. Through this collaboration, we are also increasing our own knowledge and skills. This is really an aid project in its best form since it benefits all parties," Maria Nilsson says enthusiastically.

The team has also looked at how climatesmart eHealth can be and how the technology can best be used from a sustainability perspective. This type of analysis is groundbreaking.

"The preliminary results show that eHealth is very climate-smart," says Maria Nilsson.

By building an extensive network and collaborating with both the Ministry of Health and staff at the unit for Disaster Preparedness at a hospital in Yogyakarta, knowledge of the project has been widely spread in Indonesia.

"The issue of how climate change affects human health has gone from something you



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/MARIA NILSSON

hardly discussed to being of interest for people at all levels," says Lutfan Lazuardi, one of the project partners at the Gadjah Mada University.

The Sida funding ends by December 2013, but all partners intend/have agreed to continue the collaboration. The Swedish research team is presently seeking funds from other sources.

"We have also agreed to cooperate with Ericsson in Indonesia. This could become an important component in building a long term relationship," says Maria Nilsson.

#### THE FACTS

#### **PARTNERS**

Institute of Epidemiology and Global Health at Umeå University and Gadjah Mada University in Indonesia.

#### COST

2,200,000 SEK

#### SIDA CONTRIBUTION

2,160,000 SEK

#### **PARTNER CONTRIBUTION**

40,000 SEK

#### **TIMEFRAME**

2012-2013

#### **RESULTS**

- This has been a collaboration between Umeå University and Gadjah Mada University, in which the Yogyakarta City Government, the Ministry of Health and the emergency unit of a hospital in Yogyakarta also have taken part.
- A local research team is being formed as the first research group in Asia with a focus on climate change and health.
- The project has led to the start-up of a partnership with Ericsson in Indonesia. Involving the private sector is a key component in building long term relationships.
- Both representatives from Gadjah Mada University and decision makers from various levels in Indonesia participated in a workshop in Umeå in January, to share experiences and discuss the potential of eHealth in Indonesia and Sweden.
- Two reports have been presented on the subject of climate and health in Indonesia and Sweden.