GeoHealth Thai Platform: towards a network to gather expertise, knowledge and resources in health geography

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GeoHealth Thai Platform

towards a network to gather expertise, knowledge and resources in health geography

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Background

Driven by the recent awareness of the magnitude of climate and environmental changes and their impact on human health, **interdisciplinary approaches are increasingly being implemented to understand health inequalities and the dynamics of diseases**. Combining different disciplines is necessary to address the complex interactions between societies, environment and human health but faces methodological difficulties. **Health geography** tackles such challenges by considering the interconnections between socio-economic and ecological components that define the patterns of diseases, the health status of populations and individuals or the needs for health care. It relies, for spatiotemporal analyse,s on differents tools, including **Geographic Information Systems (GIS), geostatistics and remote sensing** of satellite imagery.

Although the availability of data is growing, researchers are facing **difficulties in identifying and accessing relevant data** and, above all, **in using these data**, resulting in a paradoxically limited use of geographical information. This is the case in Thailand where lot of data is available for research. Nevertheless these data are highly heterogeneous because of their varied natures (climate and weather data, environmental data including those issued from remote sensing analysis, socio-economic data, demographic data, epidemiological data, etc.), sources (global databases, administrations communities, associations, individuals, etc.), formats (spreadsheets, text documents, databases, geographic files, etc.), and scales (global, regional, national or local) (Figure 1).

Objectives

The GeoHealth Thai Platform project aims to **promote geographical and environmental approaches in the understanding of health inequalities** through the use of Geographic Information Systems and Remote Sensing techniques. It addresses a need expressed by medical researchers in Southeast Asia, aware of the importance of climate and environmental changes and their impact on human health.

Methods

It proposes to address the difficulties encountered by many individual researchers by:

- gathering experts and researchers in order to define the needs and identify the barriers to be solved;
- training and providing expertise to researchers for the use of GIS and Remote Sensing techniques;
- building an open geocatalogue to facilitate the access to spatial data.

Capacity Building

Trainings already took place in 2014 on Geographic Information Systems and Remote Sensing techniques. Tutorials are made available for any people interesting in this project. Workshops were held in conjunction with training to develop discussions about methods and challenges of spatial analysis (Figure 2).

Figure 2: First workshop and GIS training at Mahidol University (April 2014)

Development of the GeoHealth Thai Platform

- An internet watch was set up to survey relevant information in geospatial health (http://www.netvibes.com/geohtp). It gathers: 1) the latest articles in scientific journals linked to geospatial health information, 2) links to website providing data of interest, weblinks to the partners' websites (Figure 3).

- A geocatalogue is under development (http://geohtp.seas-oi.org): it offers a set of metadata records, accessible by queries (What/When/Where), and describing the existing spatial data and the means to acquire them (Figure 4).

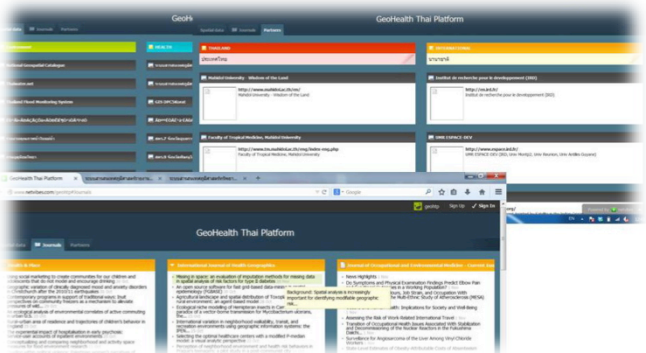

Figure 3: Internet watch in geospatial health (http://www.netvibes.com/geohtp)

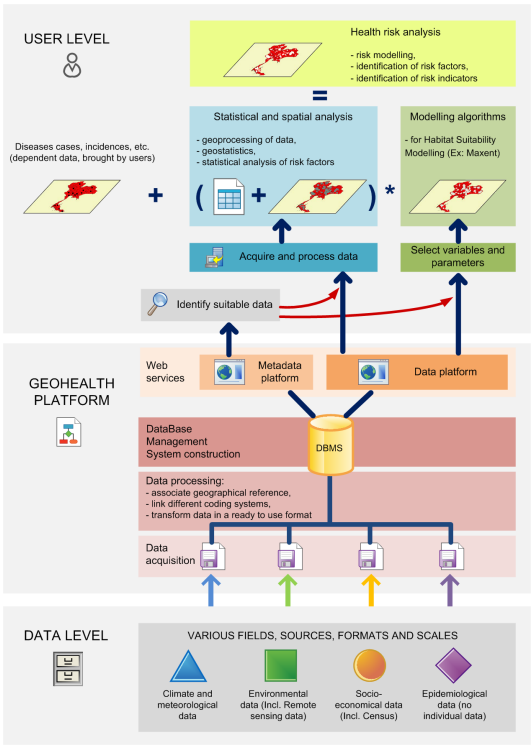

Figure 1: The Geohealth Platform stands between the data level and the user level to help identification and access to geographic data as illustrated here. Through a dedicated website, the platform provide access to metadata and data directly usable. It will also serve as a connection between health researchers or professionals and the experts of the GeoHealth network.

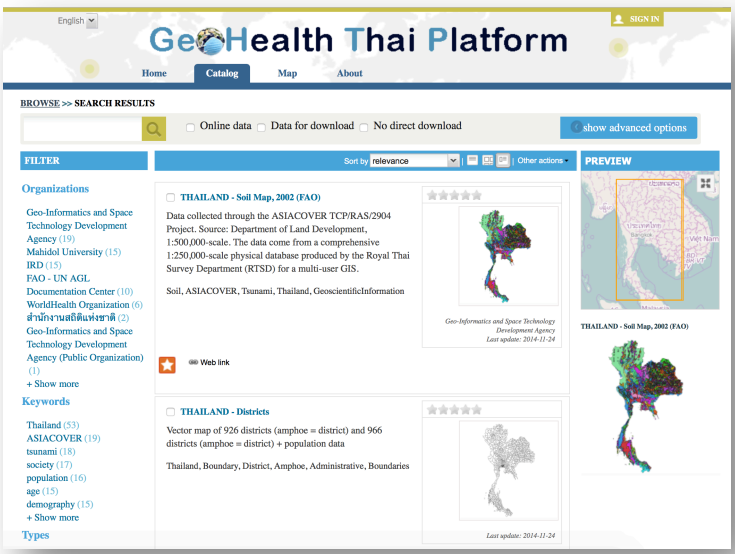

Figure 4: Development of the geocatalog (http://geohtp.seas-oi.org)

Perspectives

This project will be supported by a dedicated website, which will be the meeting point of a network of experts in Health Geography and researchers willing to integrate geographical information in their health investigations. This website will integrate online resources (documents, courses, tutorials and datasets) and link to the GeoHealth Thai Platform Catalogue.

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