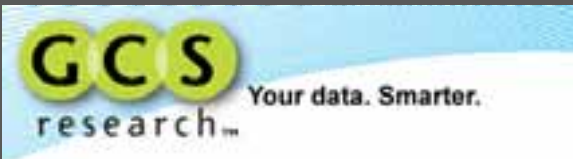


Unfolding Decades of Global Health Development



Institute for Health Metrics and Evaluation
October 19th 2010



Presented by: Christina L. Woods
Consultant, Health Informatics and GIS

IHME Background

Fact: Health spending accounts for 9% of world economic output.

- Established in 2007
- 10 year grant from The Bill and Melinda Gates Foundation
- University of Washington, Department of Global Health
- Independent research center
- Monitor global health conditions ,health systems, interventions, initiatives and reforms
- Build a base of objective evidence about what works/does not work
- Make this evidence base freely available in the public domain
- Provide high quality and timely information on health
- Inform the decision-making of policymakers and other stakeholders

Resulting in better allocation of resources to improve health conditions and health systems performance globally.

IHME Mission

- **Vision**

IHME aspires to make available to the world high-quality information on population health, its determinants, and the performance of health systems. We seek to achieve this directly, by catalyzing the work of others, training researchers and informing policymakers.

- **Mission**

To improve the health of the world's populations by providing the best information on population health.



IHME Global Health Data Exchange

News

Publications

Datasets

Datasets

IHME Research

- [Adult Mortality \(Global\)](#)
- [Child Mortality \(Global\)](#)
- [Corrected Sibling Survival Methods \(Global\)](#)
- [Death Distribution Methods \(Global\)](#)
- [Development Assistance for Health \(Global\)](#)
- [DTP3 Immunization Coverage \(Global\)](#)
- [Educational Attainment and Child Mortality \(Global\)](#)
- [Hearing Loss Prevalence \(US\)](#)
- [Insecticide-treated bed nets \(Sub-Saharan Africa\)](#)
- [Maternal Mortality \(Global\)](#)
- [Public Financing of Health \(Developing Countries\)](#)
- [Summary Birth History Methods \(Global\)](#)
- [Systolic Blood Pressure \(Japan\)](#)

Other Health Indicators

- [Gross Domestic Product \(GDP\)](#)

GIS Tool

In the Works:

IHME's vision is to make high-quality information on population health, its determinants, and the performance of health systems available to the world. We hope to achieve this through the development of an online data platform for global health data. The platform will be simple to use and accessible to all. It will include:

- All research results generated by IHME
- Extensive documentation for all datasets
- Source data (where we can legally share the datasets) or links to the data owner
- Datasets for other health indicators (such as, education level and GDP)

In addition, we will encourage other researchers and institutions in global health to post their data on the platform to expand the universe of available and accessible global health data. For more details, please contact the data team at: data@healthmetricsandevaluation.org



Institute for Health Metrics and Evaluation

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MAP THE DATA



IHME'S GIS TOOL

Latest Publications:

[The Lancet - Sept. 2010](#)
Increased educational attainment and its effect on child mortality in 175 countries between 1970 and 2009: a systematic analysis

[PLoS Medicine - Aug. 2010](#)
Rapid scaling-up of insecticide-treated bed net coverage in Africa and its relationship with development assistance for health: A systematic synthesis of

Call for Fellows

Help meet global health's greatest challenges through innovation at IHME's Post-Graduate Fellowship. Apply by Nov. 1, 2010.

[Learn more](#)



The Institute for Health Metrics and Evaluation (IHME) is an independent research center at the University of Washington rigorously measuring the world's most pressing health issues and providing scientific evaluations of health system and health program performance in order to guide health policy and accelerate global health progress.

Research Areas:

Health Outcomes

IHME is generating scientifically sound methods and systematic estimates of health outcomes – including mortality, causes of death, and overall burden of disease, injuries, and risk factors.

Health Services

We study how health services contribute to improving health outcomes by measuring the crude coverage of specific health interventions, as well as estimating the

The Data Spot

PICK A SPOT - SAMPLE OUR STATS



Coming Up:

"Atkinson's index applied to health: can measures of economic inequality help us understand trade-offs in health care priority setting?" a seminar by Ole Frithjof Norheim of the University of Bergen [Wed., October 20, 4:15 at IHME.](#)

IHME Opportunities:

[Administration Manager](#)

[Communications Officer](#)

[Documentation Specialist](#)

[Lecturer, Global Health Economics](#)

[Post-Graduate](#)

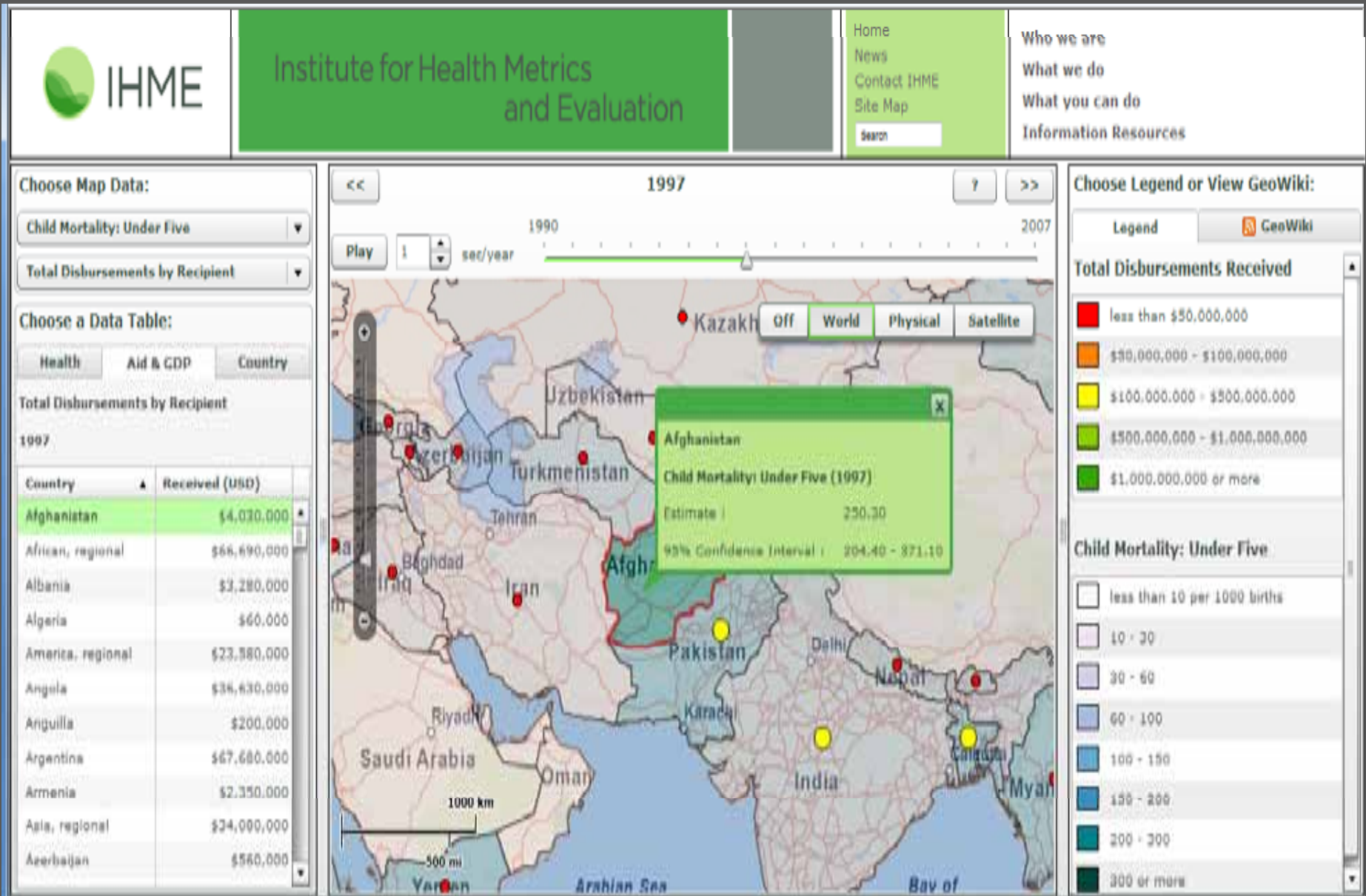
IHME GIS Tool

- Presentation/visualization tool for GHDE datasets
 - Maps health indicators, GDP and aid flows
 - Offers views of donor/recipient relationships
- Time Series
- Geowiki
- Scalable

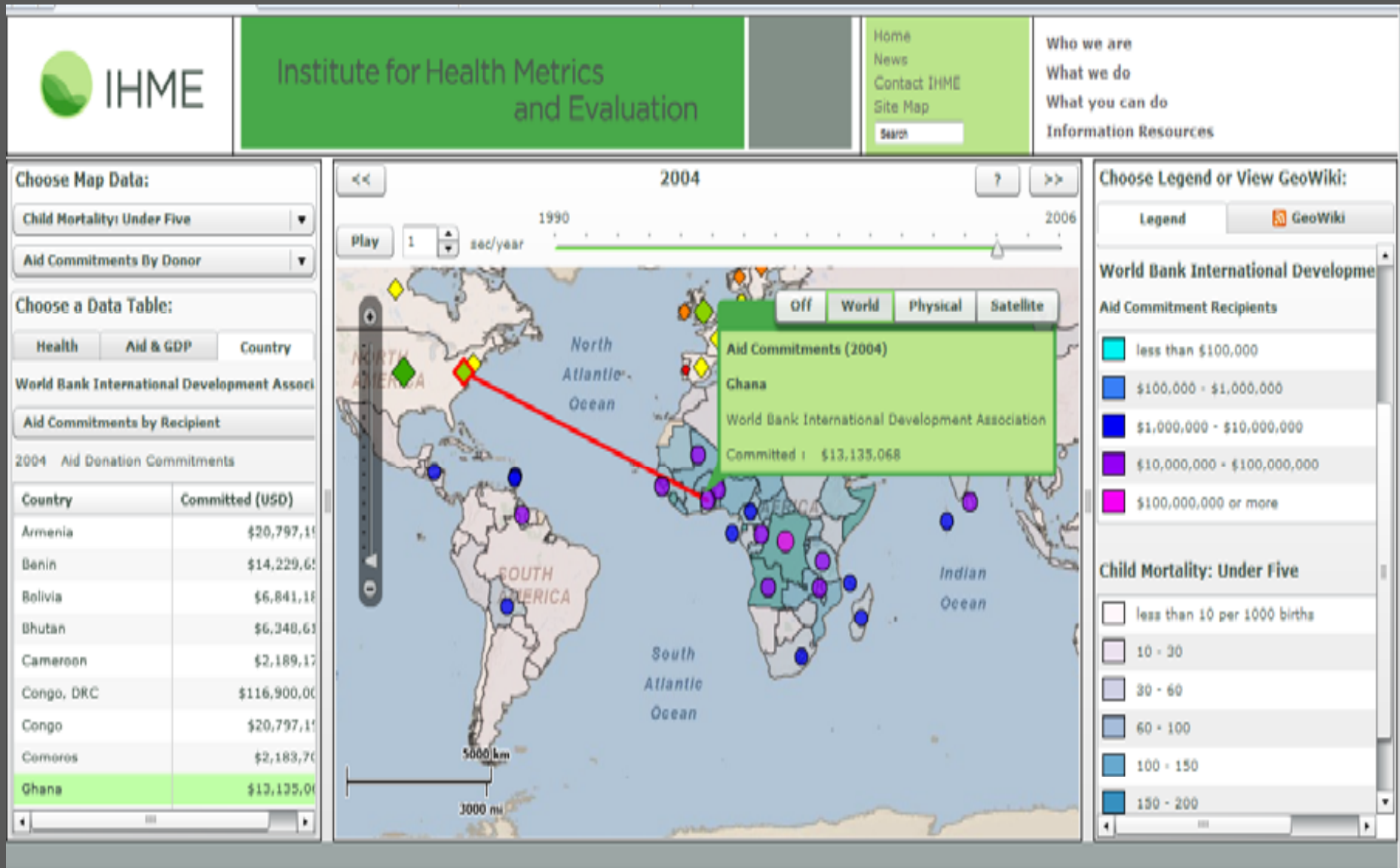
The IHME GIS Tool was built using ArcGIS Server, MS SQL Server and the ArcGIS API for Flex. ArcGIS Online services provide access to basemaps. .NET WCF technology was used to optimize the time series functionality.



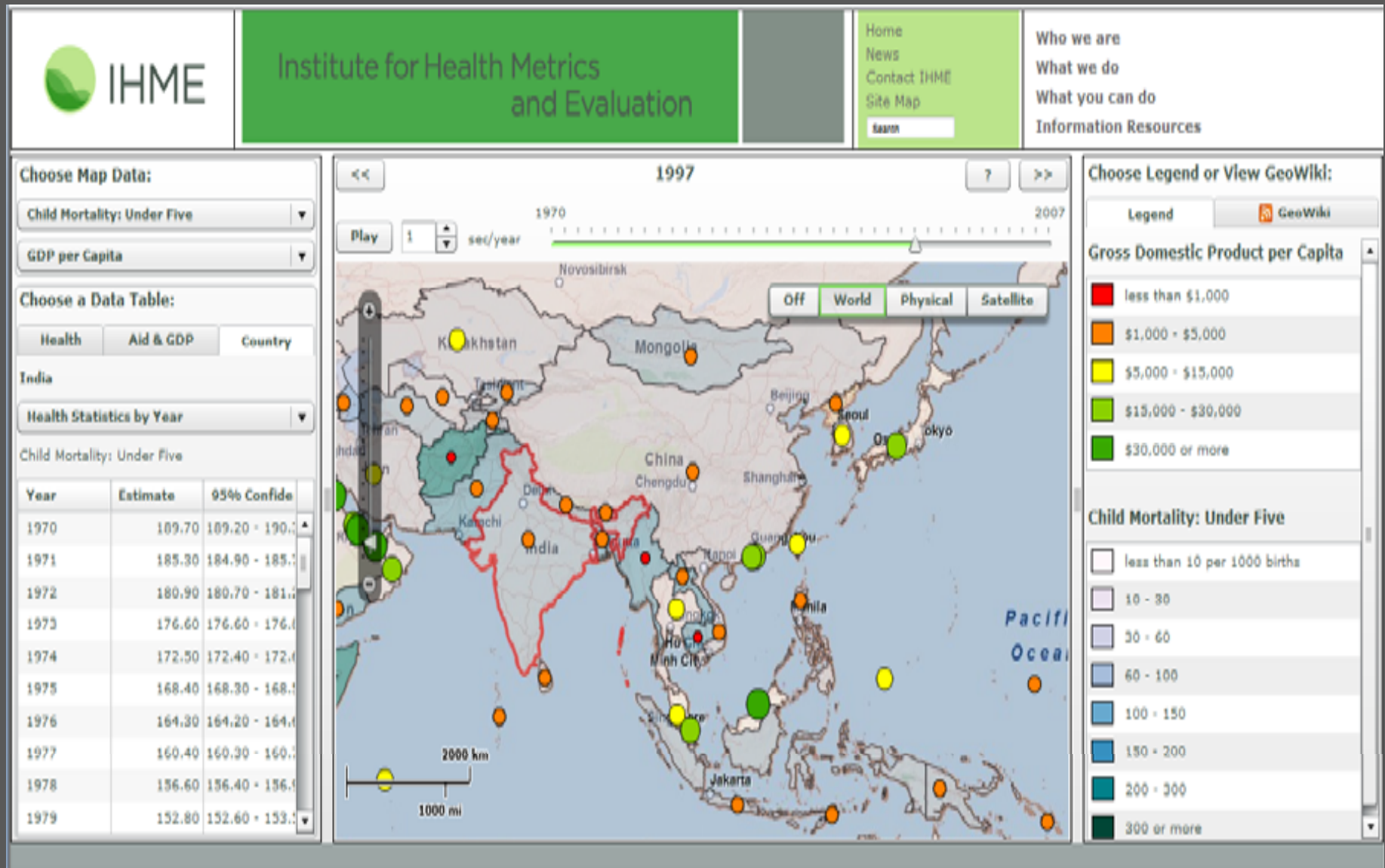
Child Mortality vs. Total Aid Disbursements



Donor/Recipient Relationships



Child Mortality vs. GDP per Capita



Geowiki



Institute for Health Metrics
and Evaluation

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can do
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Choose Map Data:

Child Mortality: Under Five

Aid Commitments By Recipient

Choose a Data Table:

Health

Aid & GDP

Country

Rwanda

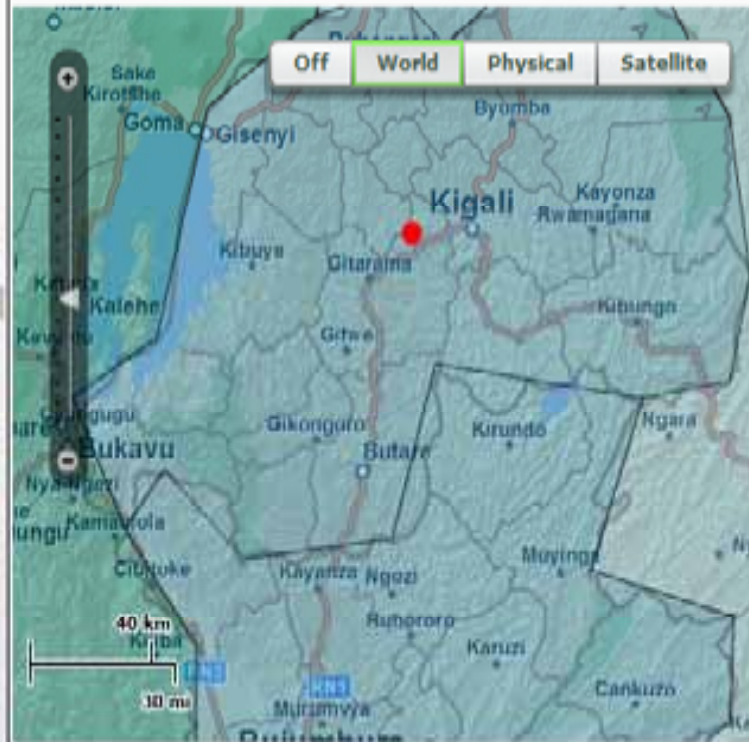
Aid Commitments by Donor

1993 Aid Commitments Received

Country	Committed (USD)
France	\$1,915,308
Norway	\$66,682
United States	\$349,767

<< 1993 ? >>

Play 1 sec/year



Choose Legend or View GeoWiki:

Legend

GeoWiki

IHME GeoWiki

Refresh

Log-in

SHOW High aid commitments around

Author: Peter speyer@uw.edu

Posted: 2009-07-16

The highest aid commitments seem to go to countries around the Indian Ocean, i.e. to South Asia and Eastern and Southern Africa

SHOW Rwanda Aid

Author: Alex Philp aphilp1@man.ac.uk

Posted: 2009-04-20

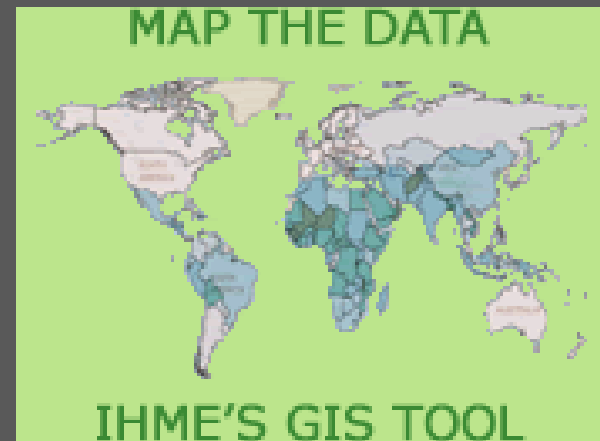
Interesting to compare disease and aid relationship with regard to internal, external, and transborder conflict for periods. Question: to what

IHME GIS Tool

- Possible future developments
 - Additional datasets
 - Ability to upload/download data
 - Spatial analysis
 - Multiple layer overlay
 - Improved data selection
 - Integration of other types of data and media.
- *What would **you** like to see in this tool?*

Demo

- [Institute for Health Metrics and Evaluation \(IHME\) - University of Washington](#)



For more information...

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speyer@uw.edu

<http://www.healthmetricsandevaluation.org>

Christina L. Woods

Consultant, Health Informatics and GIS

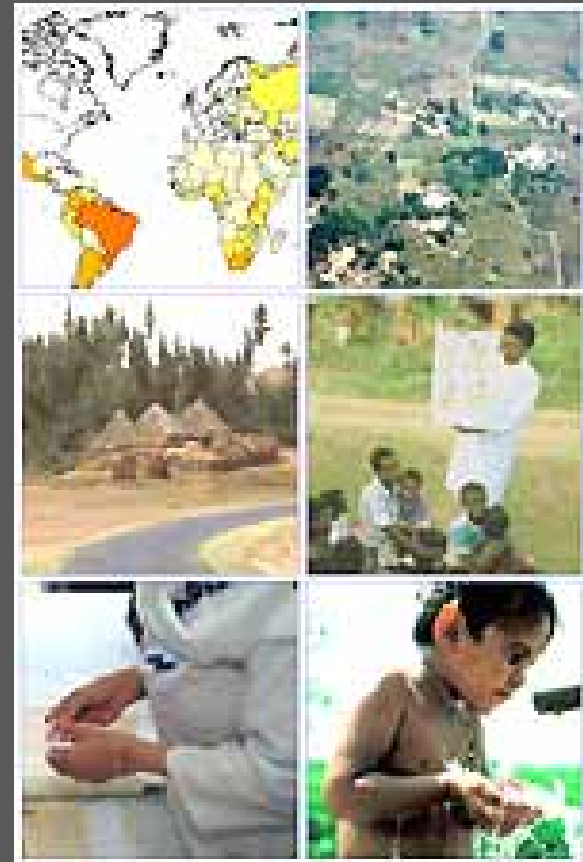
1-206-697-1744

christina.l.woods@earthlink.net

Also see the Winter 2009/2010 issue of *HealthyGIS* Newsletter for article titled "Institute Puts Health in Motion with Time-Sequence Maps"

Other Examples of GIS in Global Health

- H1N1 Surveillance
- Global Health Philanthropy
- MDG Tracking
- WHO HealthMapper
- HIV/AIDS Programs in Ethiopia
- SMS Texting and Smartphone Apps



H1N1 Surveillance

HealthMap
Global Disease Alert Map

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Track H1N1 (Swine Flu): [Global Map](#) | [U.S. Map](#) | [Outbreaks Near Me \(iPhone App\)](#)

Zoom to: [N. America](#) | [S. America](#) | [Europe](#) | [Africa](#) | [Mideast](#) | [Asia](#) | [Australia](#) | [World](#) [Full Screen](#)

Map | Satellite | Earth | Terrain

Community Contributions » Outbreak missing from the map? Help us by adding it:

EITHER paste a news report URL:

OR provide an eyewitness report:

Latest alerts

- [Confront fish disease outbreak regionally - The Southern Times](#) »
- [Flu outbreak targeting the young - McCook Daily Gazette](#) »
- [Meningitis confirmed at North Schuylkill, but officials say case is ...](#) »
- [News : Swine flu slams Morenci Schools/30 percent absent in high ...](#) »
- [South Sudan finds no sign of feared Ebola outbreak - Reuters South ...](#) »
- [Georgetown News-Graphic > Archives > Breaking News > ...](#) »
- [Local cases testing positive for swine flu - NewsandSentinel.com | ...](#) »
- [H1N1 hits here: RoHS students among first afflicted - Ripley, WV - ...](#) »
- [4th Swine Flu Death Confirmed in Cabell County](#) »
- [PRO/MBDS> Chikungunya - Viet Nam: Hanoi, susp., REJ](#) »
- [PRO/AH/EDR> Avian influenza \(54\): Cote d'Ivoire \(Abidjan\) wild birds](#) »

Last update: 21 Oct 2009 11:08 | Next update: 21 Oct 2009 12:08

Legend

- Country level
- Province or local level
- Heat Index:
Low High
- More info...
- Related Alerts
- Translated by Google Translate
- Alerts of potential international significance

Feeds

News/Media

- Google News
- Moreover Technologies
- Wildlife Disease Node
- [+ MORE...](#)

Community Contributions

- News Repo
- Eyewitness

Official Sources

- World Health Organization
- World Organization for Animal Health

Scientific Reports

Category

- International Swine Flu
- New & Ongoing
- Warnings

Diseases, last 30

- Select: all, none
- Swine Flu H1N1
- Influenza (9)
- Not Yet Classified

Swine Flu: country by country

BBC

30 July 2009



Source: WHO, ECDC, CPC, HPA (UK), governments

Regions

Africa

The majority of our work in health, poverty, and development is done in Africa.

To learn about selected grants or watch videos about our work, move your cursor over the pushpins on the map. To learn more about our work in this region, choose a topic below:

- ▶ [Agricultural Development](#)
- ▶ [HIV/AIDS](#)
- ▶ [Malaria](#)
- ▶ [Maternal, Newborn, Child Health](#)
- ▶ [Tuberculosis](#)
- ▶ [Vaccines](#)





TRACKING THE MILLENNIUM DEVELOPMENT GOALS

Countdown to 2015: 6 years 71 days 14 hours 59 minutes 3 seconds

[HOME](#) | [ABOUT](#) | [BROWSE BY GOAL](#) | [BROWSE BY LOCATION](#) | [MDG MAP](#) | [NEWS](#) | [PRESS ROOM](#) | [SUPPORT](#)

STEP 1. SELECT GOAL INDICATOR

1. POVERTY

Population below \$1 (PPP) per day consumption, (%)

Children under 5 moderately or severely underweight, (%)

2. EDUCATION

Net enrollment ratio in primary education, both sexes

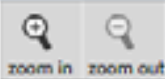
3. WOMEN

Seats held by women in national parliament, (%)

Gender Parity Index in primary level enrollment

STEP 2. SELECT LOCATION

All
Afghanistan
Albania
Algeria
Andorra

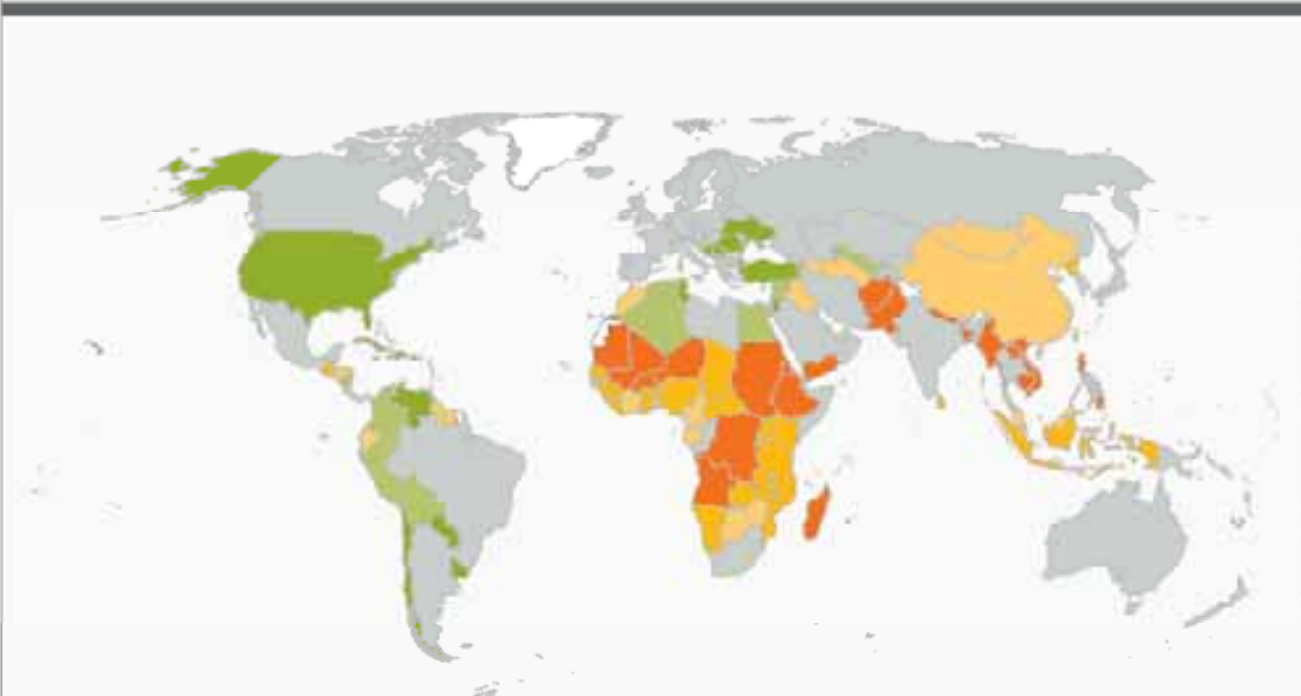


1990 - 1994 1995 - 1999 2000 - 2004

STEP 3. SELECT YEAR

LEGEND Children under 5 moderately or severely underweight, percentage

30% or more 20% - 29% 10% - 19% 5% - 9% Less than 5% No data





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Public Health Mapping and GIS

WHO > Programmes and projects > Public Health Mapping and GIS > Tools
[printable version](#)

The HealthMapper

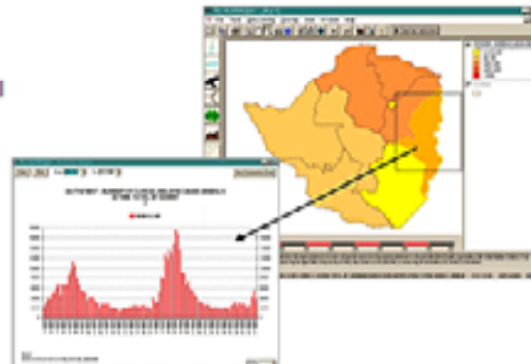
The HealthMapper is a surveillance and mapping application, developed by WHO, that aims to address critical surveillance information needs across infectious disease programmes at national and global levels.

The HealthMapper is a user-friendly data management and mapping system customized specifically for public health users. The system facilitates data standardization, collection and updating of data on epidemiology and on interventions and provides immediate visualization of data in the form of maps, tables and charts.

The HealthMapper also packages a database of core baseline geographic, demographic and health information, including the location of communities, health care and education facilities, accessibility by road, access to safe water and demography. The system is currently in operation to support a range of infectious diseases in over 60 countries in all regions of WHO. Key infectious disease programmes currently using the system include Roll Back Malaria, Lymphatic filariasis Elimination, Buruli Ulcer, Guinea worm Eradication, Onchocerciasis Control Programme, and Polio Eradication. In 2003, the system supported the implementation surveillance of HIV/AIDS/STIs (sexually transmitted infections), Tuberculosis, Control of Communicable Diseases in Complex Emergency Situations, Outbreak Alert and Response and Integrated Management of Childhood Illnesses.

- [Frequently asked questions about the HealthMapper](#)

[HEALTHMAPPER DOWNLOAD](#)



Monitoring seasonal transmission patterns of malaria with the HealthMapper: one click on a region displays the related historical data by week.

Ethiopia – HIV/AIDS programs

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National Mapping Agencies Enlisted in the Fight Against HIV/AIDS

Many African countries have robust spatial data infrastructure (SDI) initiatives underway. All too often, however, the health sector is not involved in these efforts. As a result, investments made by countries in developing SDI may fail to benefit those working to protect the health of citizens.

To address this gap, in April 2009, MEASURE Evaluation, PEPFAR, and USAID partnered with UNAIDS, WHO and the UN Economic Commission for Africa (UNECA) to host a workshop in Addis Ababa, Ethiopia encouraging dialogue between 188 health leaders and geographic information systems (GIS) specialists from 30 African nations and 6 non-African nations. For the first time in Africa, the workshop explored potential for data sharing and collaboration in the effective use of geography and GIS technology for HIV/AIDS interventions, with the ultimate intent of strengthening national SDI efforts.

As a direct result of the workshop, UNECA's Committee on Development Information, Science & Technology (CODIST) approved resolutions calling for improved cooperation between ministries of health and national mapping agencies (NMAs). Recognizing the current and potential role of NMAs, delegates urged member States to ensure that the health sector actively engages national SDI.

Workshop agenda, presentations, group work documents and executive summary can be accessed [here](#).



NEWS

[IHFAN Contributes to WHO's M&E of Human Resources for Health Handbook](#)[Health Facility Data Collection Workshop Curriculum Developed by IHFAN](#)[Child Status Index Guides Now Available in Hard Copy](#)[Smiling Sun Baseline Evaluations Completed in Bangladesh](#)[64 People Trained in PEPFAR Next Generation Indicators in Vietnam](#)

EVENTS

- Organizations seek effective use of GIS in HIV/AIDS Programs
- First pan-African conversation between NMAs and health sector leadership on establishing a community of practice around GIS and HIV/AIDS interventions.

Mobile technologies and rapid SMS... Texting away malnutrition in Kenya



- United Nations Vodafone Foundation
- Millennium Village Program building cellular infrastructure
- GSMA and Bill and Melinda Gates Foundation partnership

By 2020, the mobile phone is expected to be the primary connection tool for most people in the world

