A Community of Practice (CP) Approach For Integrating Earth Observation with Human Health & Environmental Decision-Making

Air Quality and Health CP

User Interface Committee (UIC) Meeting
Washington, DC

Gary J. Foley, PhD
UIC Co-Chair
August 1, 2007
A Spectrum of User Communities

From observations

Earth observations & earth system models
Data-to-Information archiving & services
Scientific Knowledge
Decision support tool development
Decision making
Assessment of benefits

To societal benefits

Earth system scientists and modelers
Earth system service providers
Sci Discipline Researchers
Env., Economic & Health modelers & researchers
Policy Makers, Env. Managers & PH Officials
Public officials, advocacy groups and the Public

From observations to societal benefits.
Communities of Practice (CP)

A user-led community of stakeholders,

- from providers
- to the final beneficiaries of Earth observation data and information,

with a common interest in specific aspects of societal benefits to be realized by GEOSS implementation.

The Communities of Practice will be self organized, reporting progress to UIC/GEO
An Example Community of Practice: Air Quality & Health

“The world is intuitively weaving itself into networks.”
Real-time AQ Reporting

The Public

Hazard Alerting Community

Public Health Officials

Operational Forecasting Community

Local & Regional Air Quality Managers

Atmospheric Observation Community
Current AQI – Particle Pollution (PM2.5)
Current AQI - Particle Pollution (PM2.5)
Real-time AQ Forecasting

The Public

Hazard Alerting Community
Public Health Officials

Operational Forecasting Community
Local & Regional Air Quality Managers

Atmospheric Observation Community
June 9th Peak Ozone Forecast
Real Time Alerting of the Public

The Public

Operational Forecasting Community

Health Community Of Practice

Atmospheric Observation Community

Public Health Officials

Local & Regional Air Quality Managers
ENVIROFLASH

Click on your city to sign up for ENVIROFLASH

Cities with EnviroFlash

Cities with other Air Quality E-mail Notification systems

Aiken-Augusta - SC/GA, SC
Ann Arbor, MI
Asheville Ridge Tops (above 4000 feet), NC
Asheville Valleys (below 4000 feet), NC

Click a city on the map above. For EnviroFlash cities, an on-line subscription page allows users to sign up, edit the reported information, or cancel the service. Once you choose the type and frequency of service that you
Real Time Modeling of Smoke Plumes

The Public

Hazard Alerting Community

Public Health Officials

Operational Forecasting Community

Local & Regional Air Quality Managers

Atmospheric Observation Community
Better Air Quality Information for Public Health Tracking

The Public

Hazard Alerting Community
Public Health Officials
Operational Forecasting Community
Local & Regional Air Quality Managers
Atmospheric Observation Community
Partnerships in Better Characterizing Air Quality

Monitoring  ↔  Modeling  ↔  Satellite
The Public Health Air Surveillance Evaluation (PHASE) Project

- Develop and evaluate alternative air quality characterization methods for environmental public health tracking
  - Air Pollutants
    - Ozone and Particulate Matter
  - Health Endpoints
    - Asthma and Cardio Vascular Disease
- Working with 3 CDC State Partners
  - Maine
  - New York
  - Wisconsin
An Example Community of Practice: Air Quality & Health

The Public

Interdisciplinary Forum and Workshop on Biodiversity and Human Health
September 2006