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Analysis of the NIEHS Global Environmental Health Portfolio (2005-07)

NIH Portfolio Analysis Workshop

February 6, 2012

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

Background/Purpose

- Environmental Health contribution to disease burden are 25-33%
- Those who are addressing Environmental Health issues call for collective action
- Global Environmental Health (GEH) explicit component of the NIEHS Strategic Plan (2007)
- Identify and foster partnerships

Agenda

- Describe portfolio analysis
- Discuss key challenges

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Challenge 1: Defining Global Environmental Health

Contamination knows no borders

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Path: HOME » NEWS

First debris from Japanese earthquake/tsunami reaches Olympic Peninsula

By Arwyn Rice
Peninsula Daily News

Peninsula Daily News: 12/14/2011

PORT ANGELES — The first piece of debris that could be identified as ...hing up on the West Coast from the March 11 tsunami in Japan — ...ack float — was found on a Neah Bay beach two weeks ago, ...ographers Curtis Ebbesmeyer and Jim Ingraham said

... known as DriftBusters Inc. — who ... water currents in the Pacific since ...llon drum-sized floats also ... at

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Recent Headlines

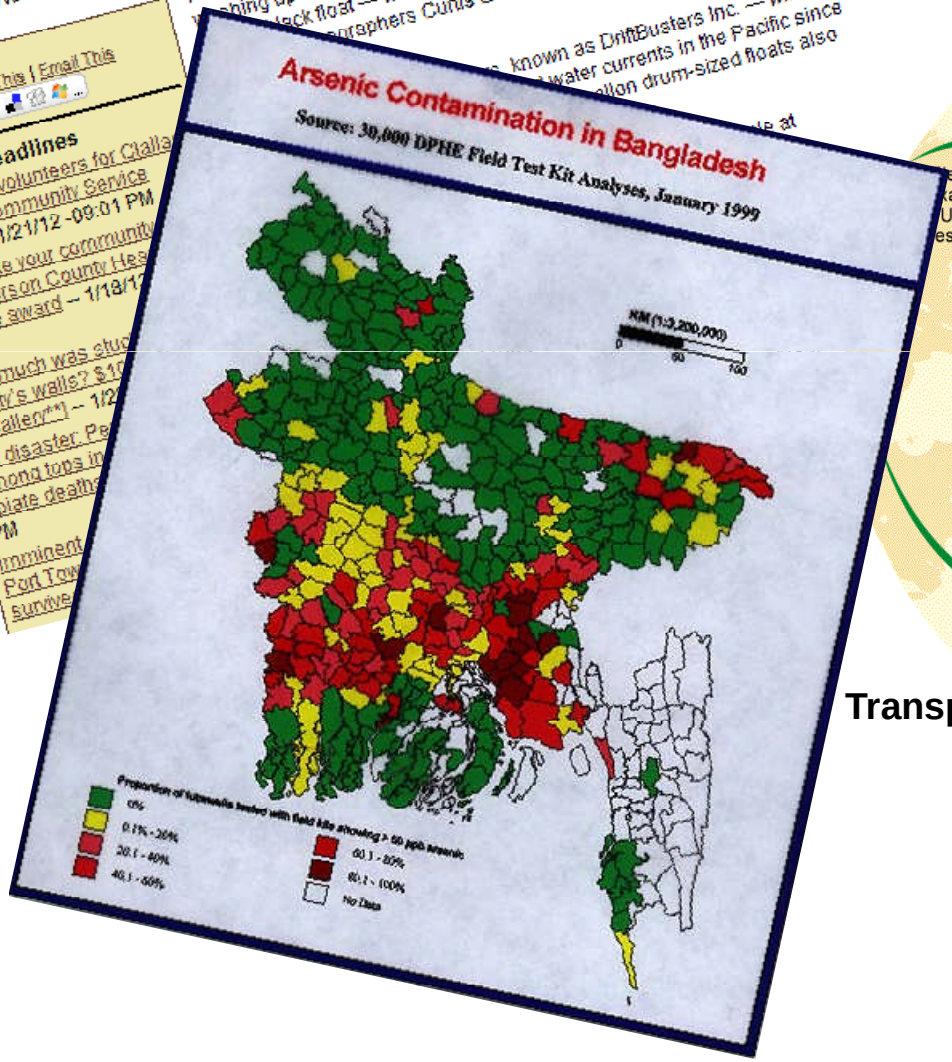
Nominate volunteers for Olalla County Community Service Award -- 1/21/12 -09:01 PM

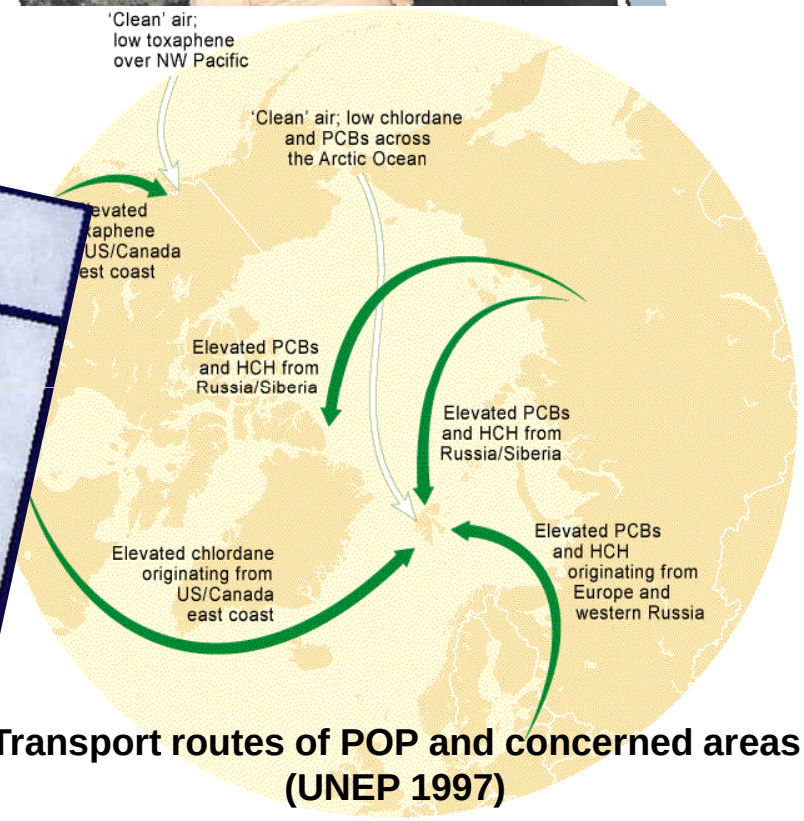
Nominate your community for Jefferson County Hes... Service Award -- 1/18/12 ... AM

How much was stu... Smitty's walls? $1... [**Gallery**] -- 1/2...

Pill disaster Pe... among tops in ... opiate death... PM

Imminent ... Port Tow... survive...





Transport routes of POP and concerned areas (UNEP 1997)

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What is GEH?

- For our purposes, grants included in GEH portfolio if any part of the project is:
  - Occurring outside the US

    AND
  - studying a foreign population (including tissue samples)
  - OR collecting environmental samples

  - *Did not include work performed <u>solely in the US</u> that may have global impact*
    - *Methyl Mercury*
    - *Particulates*
    - *Arsenic*

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Challenge #2: Data

Identifying the GEH Portfolio was a Labor-Intense, Manual Process

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Project Identification Process: Step 1 – Cast a wide net

- Anything checked “foreign grant” in IMPAC II with budget dollars paid in FY 2005, 2006 or 2007
- Any grant identified in the Foreign Tracking System (FIC/US State Dept Database) (2005-2007)
- Any grants identified by Program Administrator
- Human subjects was a helpful (but imperfect) marker
- ~135 grants, 275 records, including sub-projects and duplicates

Identification Process
Step 2: Narrowed List

- Removed collaborations (i.e. no samples or cohorts)
- Removed foreign conferences, contracts, and work done by US university on foreign datasets
- Asked Program Administrators: “Is this really “global” in nature
  - E.g. MeHg = global problem but not all NIEHS MeHg studies are GEH
- Final Count = 57 grants (not all are active in every FY)

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Challenge 3: Characterizing the Portfolio

Mechanism

Contaminant

Disease end point

Budget

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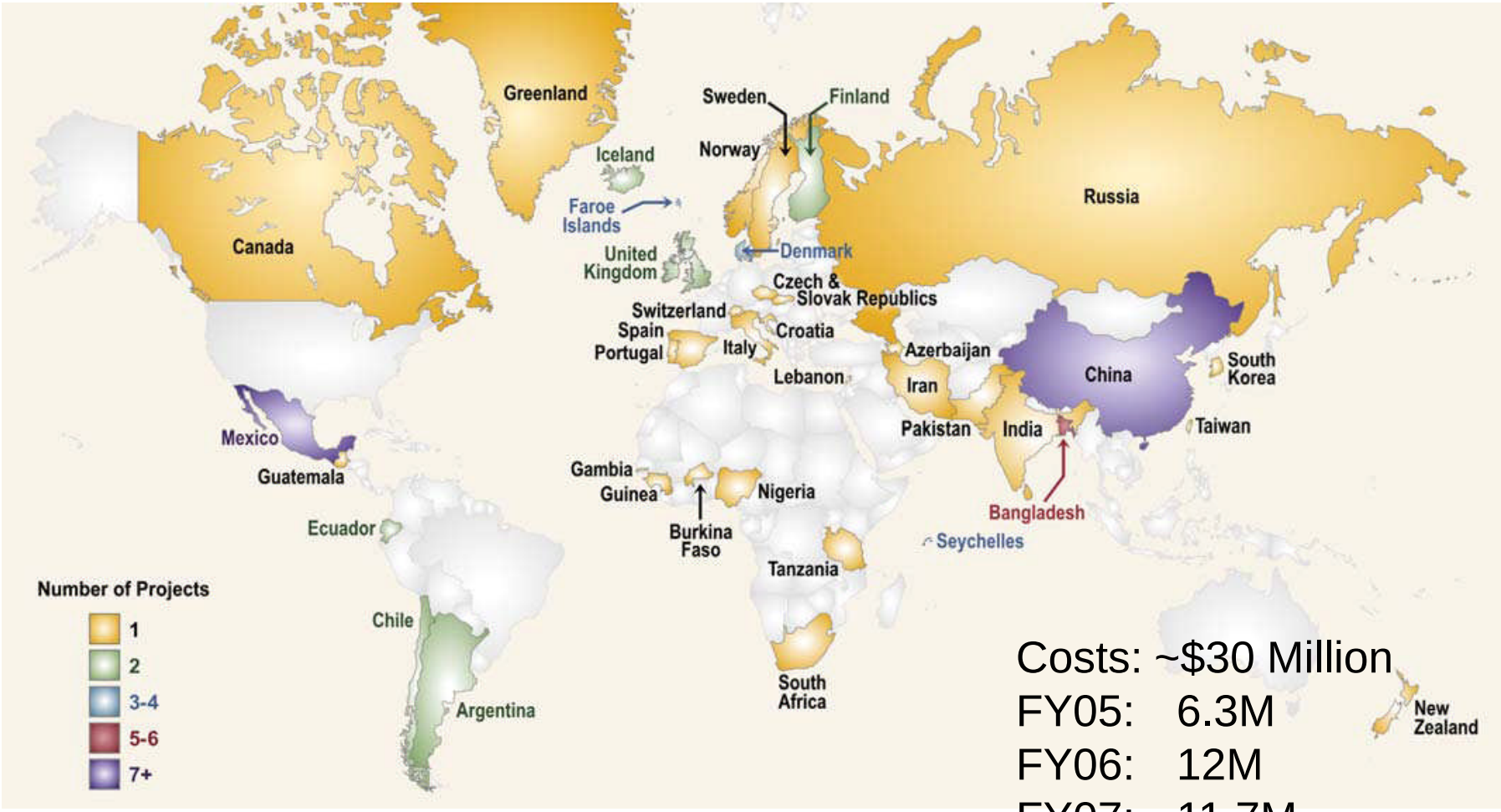
Coding Process

- Automated information from NIEHS PCC codes
  - Mechanisms, Program Officer, Science Code
  - Each project has one and only one “bin”
- Manual coding
  - Country, exposure, disease/endpoint/organ system
  - Usually based on abstract and title only
  - Each project can have more than one “bin”
- Budgets
  - Challenge: Large projects with only small % for GEH activity
  - Created a “best estimate” from multiple sources

NIEHS GEH Portfolio: Countries (2005-2007)



Costs: ~$30 Million
FY05: 6.3M
FY06: 12M
FY07: 11.7M

57 projects in 37 countries across the globe

Research
Funded by NIEHS - Extramural
Who We Fund
By Code
By State
Full Search
All Scientists
All Laboratories

A+ A-

Who We Fund - By Science Code

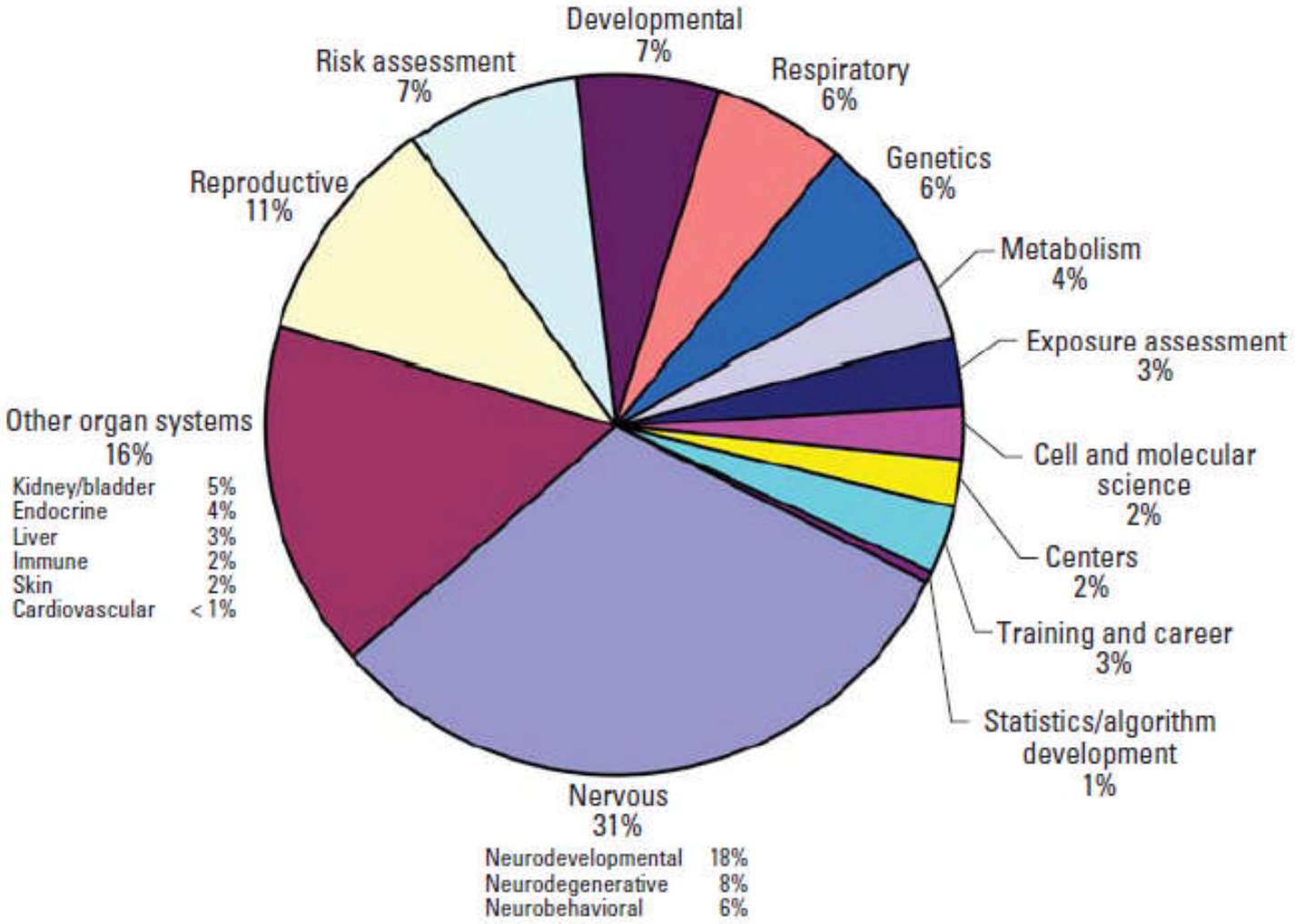
Word | Excel | PDF

The following list of two-digit science codes are used to assign the NIEHS Extramural Research Portfolio to specific areas of science. There are a total of 99 codes. However, some have been left blank (not shown), to allow for future emerging areas of science. The codes have been placed into 6 major categories: Basic Science, Centers, Organ Systems/Disease Process, Application of Technology to Disease, Training, and Translational Research. Separating the portfolio into specific areas of science allows NIEHS to better evaluate their Extramural Research Portfolio.

To view all active grants associated with a particular area of science, click on the "list" link across from the science code/area of science.

Code	Area of Science	Count *	Grants
BASIC SCIENCE			
01	Cell/Molecular	19	List
02	Apoptosis	4	List
03	Carcinogenesis/Cell Transformation	14	List
04	Cell Cycle Control	2	List
05	Signal Transduction	30	List
06	Genetic Regulation/Gene Expression	9	List
07	Gene X Environment Interaction	12	List
08	Genetics/Nucleic Acid	13	List
09	DNA Repair	27	List
10	Epigenetics	28	List

Scientific Fields in the NIEHS GEH Portfolio (2005-2007)



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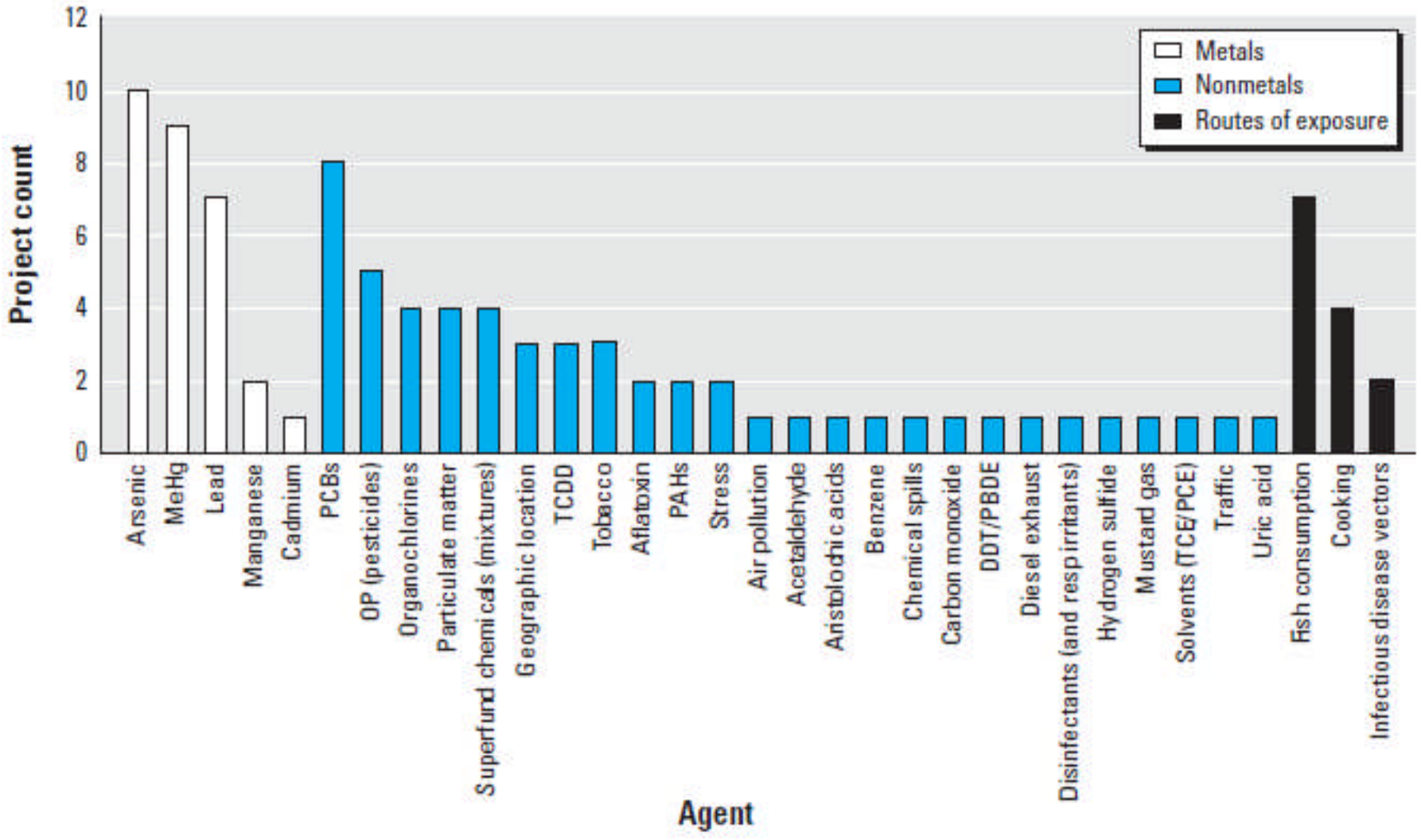
Exposure Agents: NIEHS GEH Portfolio (2005-07)



Summary of Challenges

- Initial abstracts imperfect indicator
  - Cohort locations change; No access to progress reports
- Sub projects
- Geographic location information in IMPAC II
- FTS records did not always match NIEHS data
- Labor intense >250 person hours required

Outcomes:

- Initiatives
  - Cookstoves: Indoor biomass burning
  - Continuing focus of discussions relating to the FY12 Strategic Plan
- Partnerships:
  - Program officers able to use info to encourage collaborations
  - Continuing collaborations with FIC
- Focus on improving data infrastructure
  - Access to progress reports (HITS)
  - eSPA Chemical contamination effort

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Questions?

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