

# Development cooperation: A bibliometric approach to examine knowledge and communications

lina Hellsten (*VU University Amsterdam/Athena*)

&

Sarah Cummings (*IKM Emergent/Context, international cooperation*)

# Introduction

- Focus on development as knowledge intensive, “knowledge industry” (Powell 2006)
- Use of bibliometrics and semantic maps to examine the knowledge structure and communications of development
  - Just starting/preliminary results....
  - Millennium Development Goals, 2005-2008 as our 1st case study

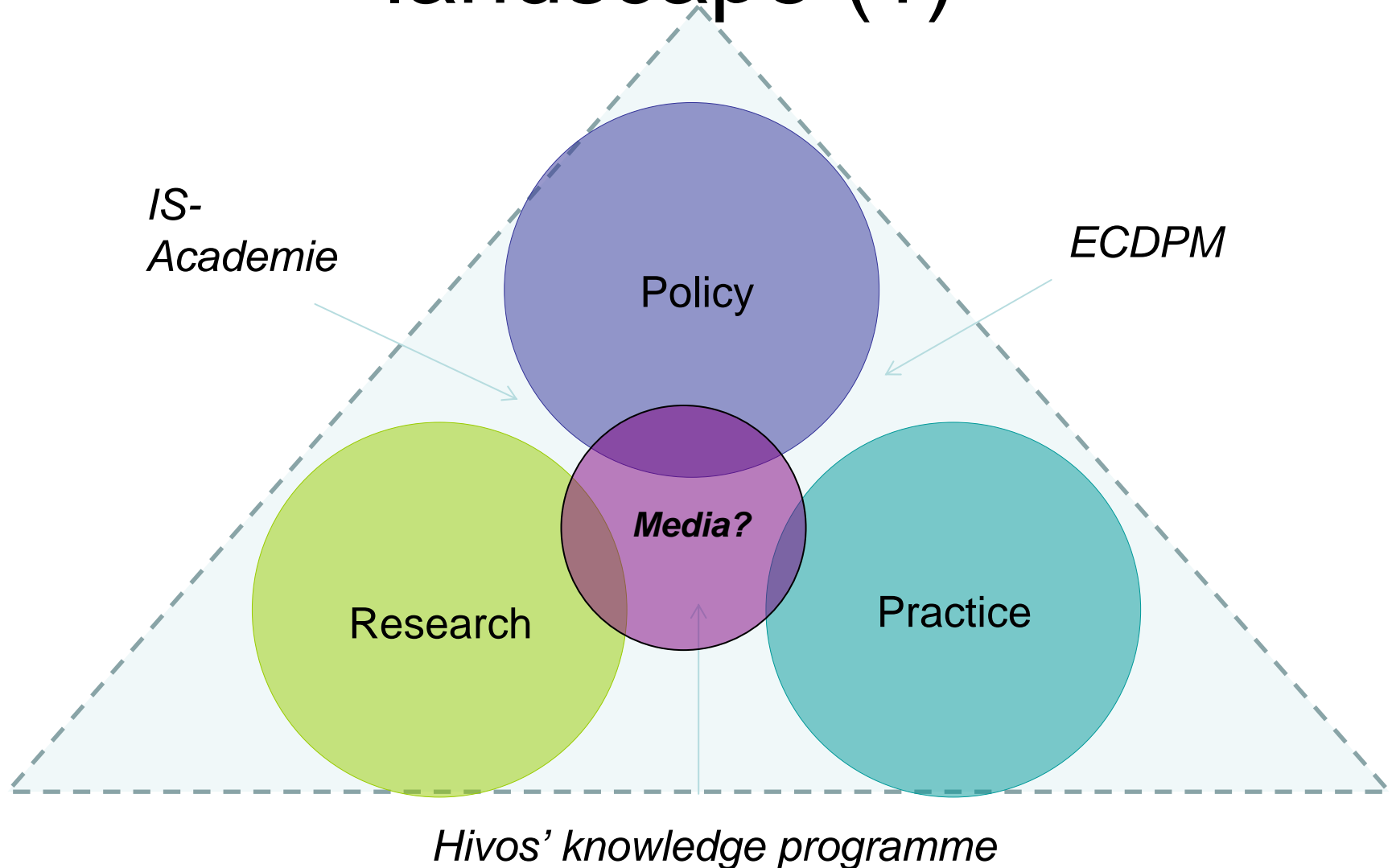
# Problem definition

“The domains of **policy**, **research** and **practice** work in isolation focusing on their own domain-related interests”

- **Researchers** want publications in top rated journals, and the *interventionism* of their approach is not acknowledged
- **Practitioners** are often in ‘do’ mode and have little theoretical underpinning
- **Policymakers** are focused on political imperatives and deadlines, often ‘cherry-picking’ to support predetermined decisions

***-The role of the media?***

# Dutch development knowledge landscape (1)



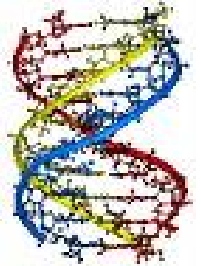
# Dutch development knowledge landscape (2)

- Model developed with Josine Stremmelaar, Wenny Ho and workshop participants, June 2009
- Disconnection between research, policy and practice
- A few initiatives and institutes  
(Some examples: Ministry of Foreign Affairs'IS-Academie, European Centre for Development Policy Management, Hivos' knowledge programme bring these domains together)
- What is the role of the media?

# Theoretical background

## 1) Triple Helix (Leydesdorff, Etzkowitz and others)

- \* university-industry-government (-publics)
- \* innovation at intersections



## 2) Wicked problems (Valerie Brown, Paul Engel and others)

- \* Wicked problems: require urgent action, but lack a “solution”
- \* Development as a wicked problem



# Bibliometric approach:

## A. Basics

- Who publishes on development cooperation?
- Proportion of different institutions and countries?

## B. Semantic Maps

- Map differences in the codification of knowledge in development cooperation?
- Systematic comparison of domains (research, practice, policy and media?)

# Author's Institutions: Top 10

(articles on MDG, 2005-2008)

WorldDevelopment (668)			Journal of Development Studies (405)			Development and Change (553)		
	Nr	%		Nr.	%		Nr.	%
WORLD BANK	43	8.5	UNIV SUSSEX	20	5.7	INST SOCIAL STUDIES	114	20.9
INT FOOD POLICY RES INST	19	3.7	UNIV MANCHESTER	17	4.8	DELFT UNIV TECHNOL	15	2.8
CORNELL UNIV	16	3.1	WORLD BANK	17	4.8	UNIV S PACIFIC	14	2.6
UNIV CALIF BERKELEY	16	3.1	UNIV E ANGLIA	16	4.5	UNIV AMSTERDAM	11	2.0
UNIV OXFORD	16	3.1	CORNELL UNIV	13	3.7	<i>UNIV DELHI</i>	<i>11</i>	<i>2.0</i>
UNIV MANCHESTER	14	2.8	UNIV HULL	12	3.4	UNIV OXFORD	10	1.8
UNIV CALIF DAVIS	12	2.4	UNIV OXFORD	10	2.8	UNIV E ANGLIA	9	1.7
UNIV SUSSEX	12	2.4	UNIV BRADFORD	8	2.3	UNIV MANCHESTER	9	1.7
UNIV WISCONSIN	11	2.2	UNIV LONDON	8	2.3	UNIV WAGENINGEN & RES	8	1.5
						CTR		
UNIV MICHIGAN	9	1.8	UNIV NOTTINGHAM	8	2.3	AUSTRALIAN NATL UNIV	7	1.3

# Author's countries: Top 10 and Top 5

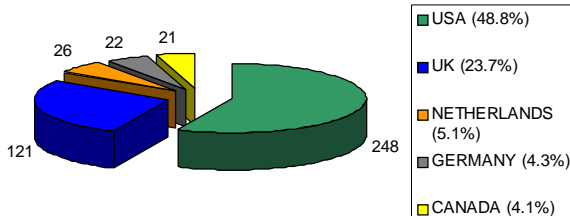
## WorldDevelopment (668)

## Journal of Development Studies (405)

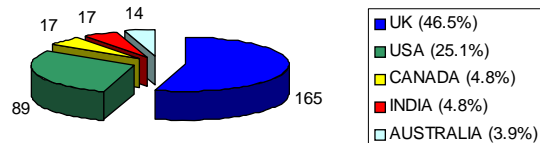
## Development and Change (553)

	Nr	%		Nr	%		Nr	%
USA	248	48.8	UK	165	46.5	NETHERLANDS	179	32.8
UK	121	23.7	USA	89	25.1	UK	102	18.8
NETHERLANDS	26	5.1	CANADA	17	4.8	USA	68	12.5
GERMANY	22	4.3	<i>INDIA</i>	<i>17</i>	<i>4.8</i>	<i>INDIA</i>	<i>50</i>	<i>9.2</i>
CANADA	21	4.1	AUSTRALIA	14	3.9	AUSTRALIA	21	3.9
AUSTRALIA	19	3.7	NETHERLANDS	14	3.9	CANADA	17	3.1
ITALY	16	3.1	<i>SOUTH AFRICA</i>	<i>8</i>	<i>2.3</i>	<i>FIJI</i>	<i>14</i>	<i>2.6</i>
<i>INDIA</i>	<i>14</i>	<i>2.8</i>	<i>PEOPLES R CHINA</i>	<i>7</i>	<i>2.0</i>	GERMANY	14	2.6
<i>MEXICO</i>	<i>12</i>	<i>2.4</i>	GERMANY	6	1.7	DENMARK	12	2.2
<i>BRAZIL</i>	<i>11</i>	<i>2.2</i>	JAPAN	5	1.4	FRANCE	8	1.5

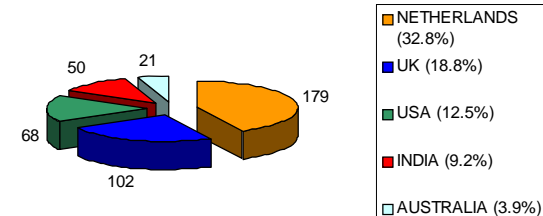
**World Development:**  
Top 5 country affiliations (on MDG), 2005-2008



**Journal of Development Studies:**  
Top 5 country affiliations (on MDG), 2005-2008

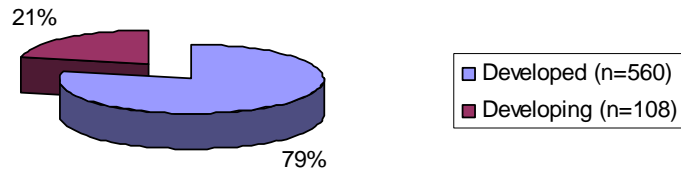


**Development and Change:**  
Top 5 country affiliations (on MDG), 2005-2008

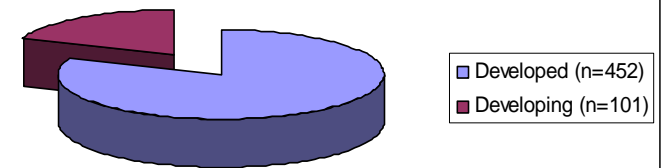


# Developed vs. developing countries?

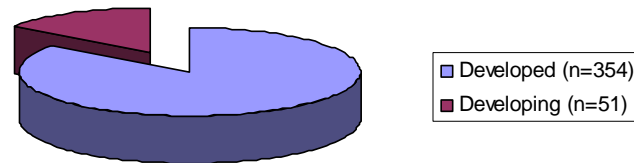
**World Development:**  
author affiliations on MDG, 2005-2008



**Development and Change, author affiliations, 2005-2008**



**Journal of Development Studies, author affiliations, 2005-2008**

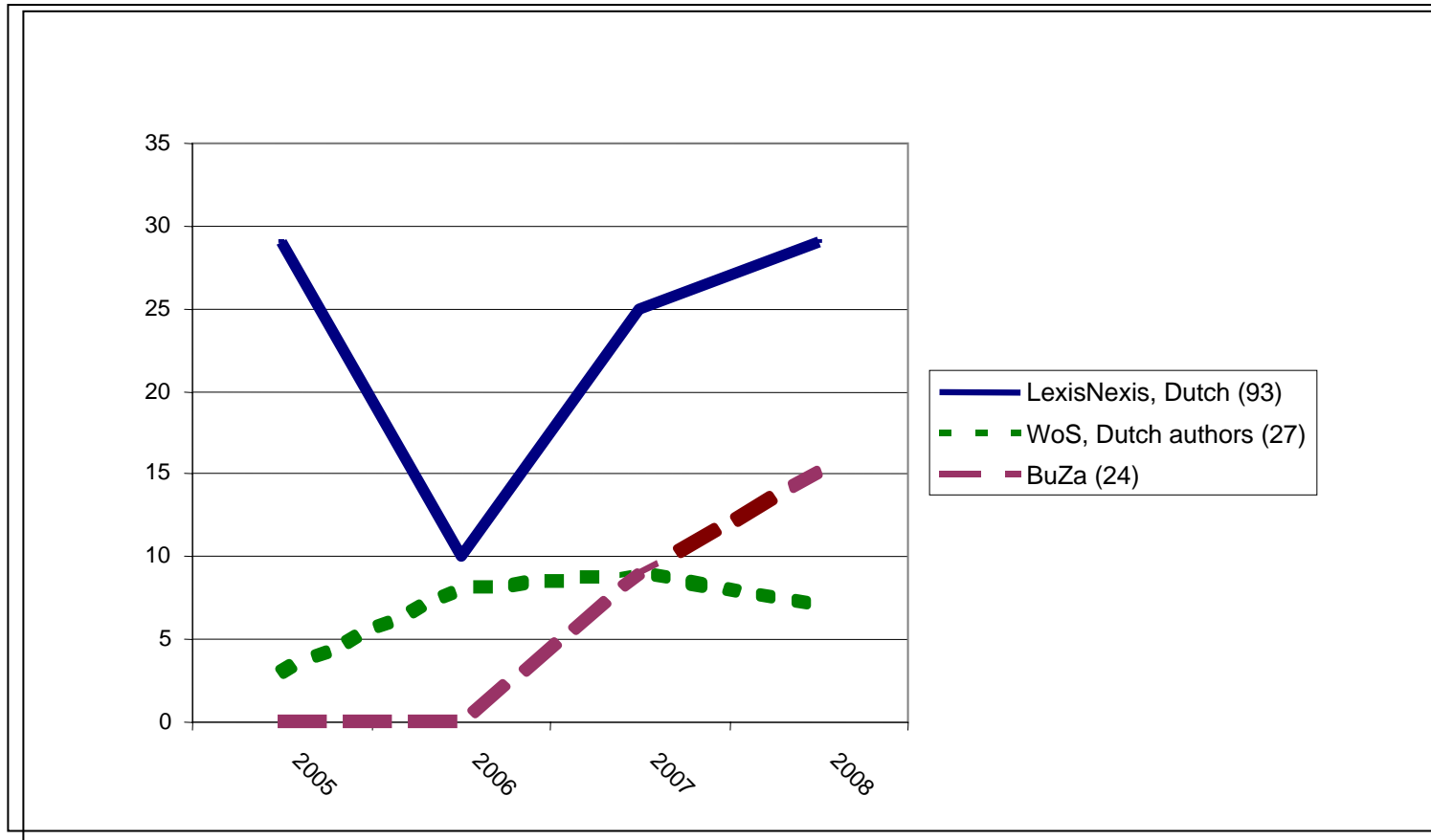


# Semantic maps

- Automated analysis of text documents
- Co-words in context
- Different levels of codification (e.g. science / mass media / policy / practice)
  
- Preliminary case study on *Millennium Development Goals* in the Netherlands, 2005-2008
  - Policy (Foreign Ministry news) BuZa
  - Science (articles authored by Dutch, published in ISI-journals, Web of Science) WoS
  - Media (Dutch newspapers, indexed in LexisNexis newspaper database) LexisNexis

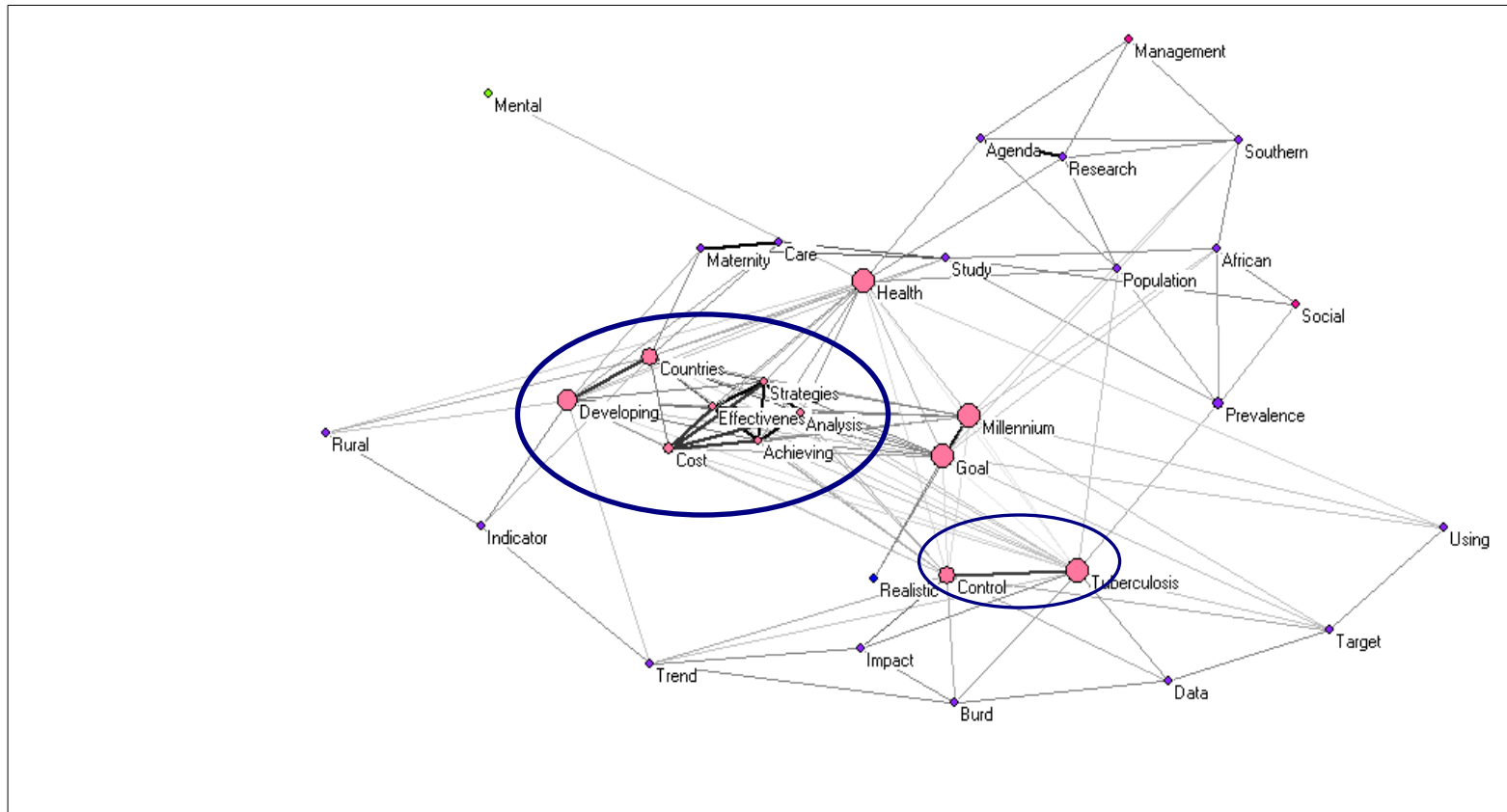
The programmes are available (free for academic use) at: [www.leydesdorff.net](http://www.leydesdorff.net)

# “Millennium Development Goals” (2005-2008)



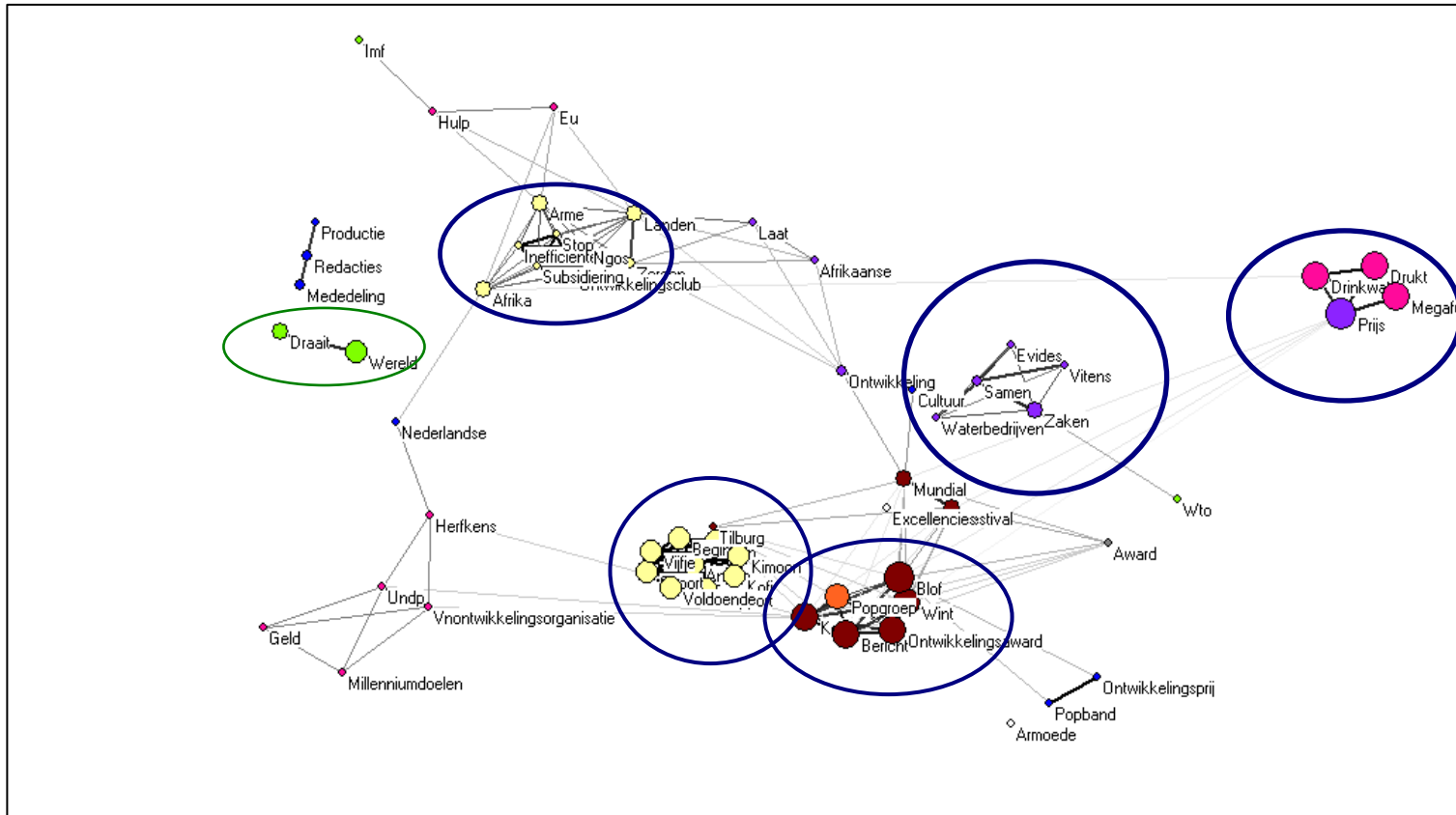


# Web of Science, main words



*“Millennium Development Goals” in the [Web of Science](#) by Dutch authors in 2005-2008  
(27 documents, 34 title words that occur more than twice )*

# Dutch newspaper headlines, main words



*“Millennium Development Goals” in Dutch newspapers, 2005-2008  
(93 documents, 69 words that occur more than twice in the headlines)*

# Conclusions (1)

## Policymaking domain

- Analysis of the Dutch Foreign Ministry (BuZa) newsletters
- Not structured, which reflects the fact that it is reacting to events
- The centrality of the Ministers (Koenders and Balkenende)
- Important themes: women, drinking water, small cluster about specific issues (schools in Uganda and Zambia), Schokland Accord
- Link to public debate (pop group award) and to events (reform of the NGO subsidies currently taking place in the Netherlands )

# Conclusions (2)

## Research domain

### **Basic bibliometrics** using Web of Science

- Dominance of Northern institutions/authors
- Dominance of large institutions/authors
- Low level of participation of institutions/authors in developing countries

### **Semantic maps** of Dutch authored papers on MDGs

- Unstructured, fragmented, emerging field
- Importance of context and location to development
- Nature of the publications cycle they are not responding to day-to-day events
- Important themes: health; effectiveness agenda (indicators, cost, impact, indicators)

# Conclusions (3)

## Public debate

- Based on words in Dutch newspaper headlines (Lexis-Nexis): semantic maps
- Link to Ministry news: drinking water, pop group award, NGO subsidies
- Political spectacles: Kofi Annan/Ki Moon
- Women?
- Some issues reach all newspapers: political spectacles, pop band, television programme
- Negative words (cynicisme, kritische, inefficiëntie etc) come from opinion pieces in newspapers

# Conclusions (4)

## Practice

- less organised field, fragmented across many NGOs and actors -- the “neglected child”
- grey literature difficult to access for research
- Symptomatic of the status and accessibility?

# Further research

- 1) Why so few authors from developing countries? (MDG as a case study & focus on the Netherlands)
- 2) How to include “practice” ? (access to grey literature)
- 3) Broadening the analysis

# Statements for discussion

- Knowledge democracy:
  - **Cross-boundary communications:**
    - To what extent can (and will) the sciences, politics, policy, media and public communication with each other?
  - **Knowledge:**
    - Who is allowed to define what is 'knowledge'? (to whom is it knowledge and why – dominant versions of the shared past)
- **Democracy and participation**
  - \* What are the limits of this connection?