

# **RURAL TRANSPORT: OUTSTANDING KNOWLEDGE GAPS**

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# WHAT IS IFRTD

- IFRTD is the International Forum for Rural Transport and Development
- A global network of individuals and organizations working together towards improved access and mobility for the rural poor in developing countries
- Currently having approx. 4,000 members
- 30 National Forum Groups
- Based in London, UK with 4 regional coordinator offices: Kenya, Cameroon, Sri Lanka, and Peru
- Currently supported by the Swiss Agency for Development Cooperation (SDC), and the Swedish International Development Cooperation Agency (SIDA) as core donors



# INFORMATION: WEBSITE

- Maintenance and Update of French, Spanish & English sites  
[www.ruralwaterways.org](http://www.ruralwaterways.org),  
[www.ifrtd.org](http://www.ifrtd.org) and  
[www.mobilityandhealth.org](http://www.mobilityandhealth.org)
- Ongoing development of site content and database driven News Section
- Monthly E-newsletter: well received, tripled web hits
- Opinions Fair resulted in content for issue pages



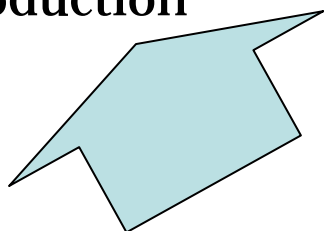
# STRUCTURE OF PRESENTATION

- What we have learned so far
- Knowledge gap to what?
  - Transport and MDGs
- Southern-driven transport agenda for rural development

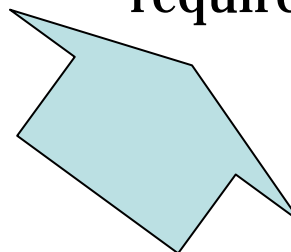


# WHAT HAVE WE DISCUSSED?

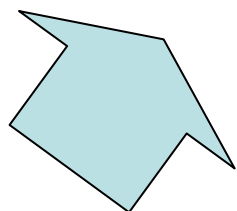
Access and  
agricultural  
production



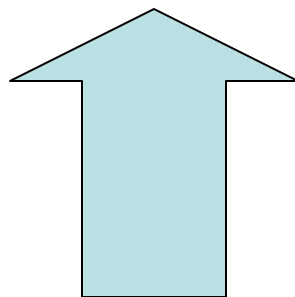
End user  
requirement



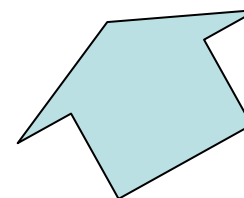
## **RURAL TRANSPORT**



Emerging solution:  
Technical



Emerging solution:  
Management



Emerging solution:  
Finance



**IFRTD**

# THE NEEDS FOR DIFFERENT PERSPECTIVES ON TRANSPORT ISSUES: ACCESS AND SAFETY



**STUCK IN TRAFFIC??**



**RURAL TRANSPORT SAFETY SHOULD BE PUT IN DIFFERENT PERSPECTIVES**



*Source: Beusch/SDC, 1997*

# THE NEEDS FOR DIFFERENT PERSPECTIVES ON TRANSPORT ISSUES: RURAL WATERWAY



- Importance of Rural Water Transport (RWT)
  - For many poor people RWT is the **ONLY** means of mobility and access
  - RWT users are poor and isolated
  - “Invisible”
- Characteristics of the system:
  - No data, no tools
  - Externalities & hidden subsidies
  - Wrong perceptions at all levels: cost, efficiency, safety
  - Unequal treatment: policy level, credit provision etc
  - The needs for complementarity: not competition



# RURAL TRANSPORT CHARACTERISTICS

| Indicators                    | Kenya                           | Malaysia                       | India                          | Bangladesh                     | Western Samoa                  | South Korea                    |
|-------------------------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Typical distance of transport | 90% of trips is less than 7 km  | 75% of trips is less than 7 km | 90% of trips is less than 5 km | Most trips are less than 12 km | Most trips are less than 5 km  | Most trips are less than 10 km |
| Average on-farm distance      | 0.8 km                          | 1 km                           | 1.5 km                         |                                |                                |                                |
| Average off farm distance     |                                 | 10 km                          | 8.3 km                         |                                |                                |                                |
| Loads transported             | 70% of trips is less than 25 kg |                                |                                | Most trips are less than 50 kg | Most trips are less than 80 kg | 30 – 80 kg                     |

Source: Howe, 1997 (after Carapetis et al., 1984 and Barwell, et al., 1985)



**IFRTD**

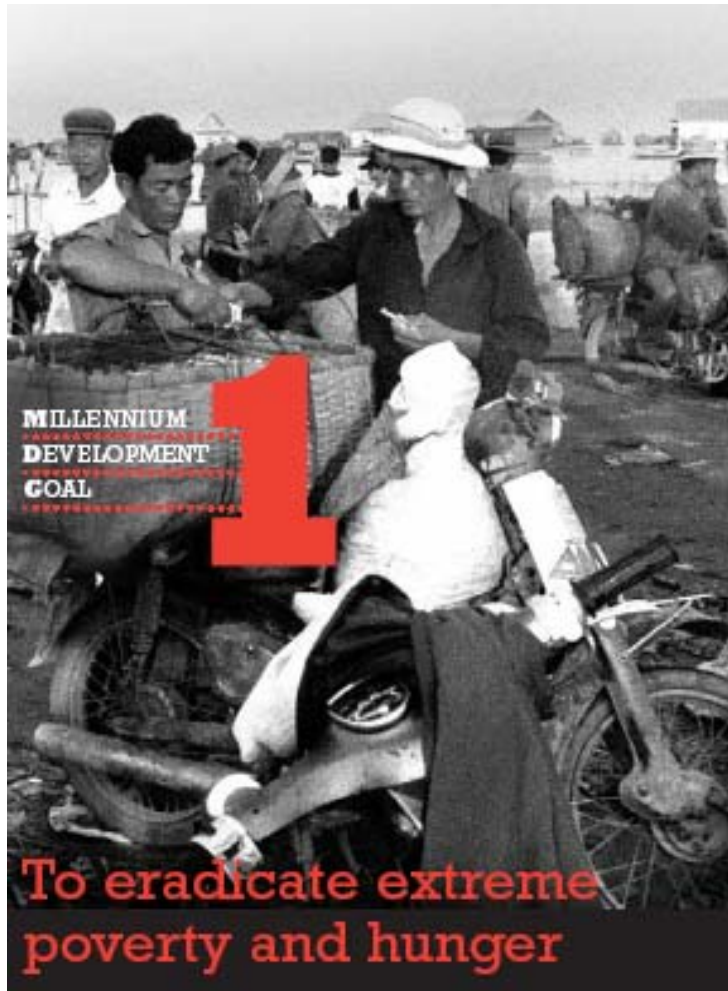


# HOW ASIAN RURAL VILLAGE IS DEFINED?

|         | Philippines                | Laos                | Indonesia                       |
|---------|----------------------------|---------------------|---------------------------------|
| Village | Barangay<br>(150 - 200 HH) | Ban<br>(40 – 60 HH) | Desa<br>(200 – 900 HH)          |
| Hamlet  | Sitio<br>(20 – 30 HH)      | 10 – 20 HH          | Kampung/Dusun<br>(100 – 150 HH) |



# TRANSPORT AND MDG (1)

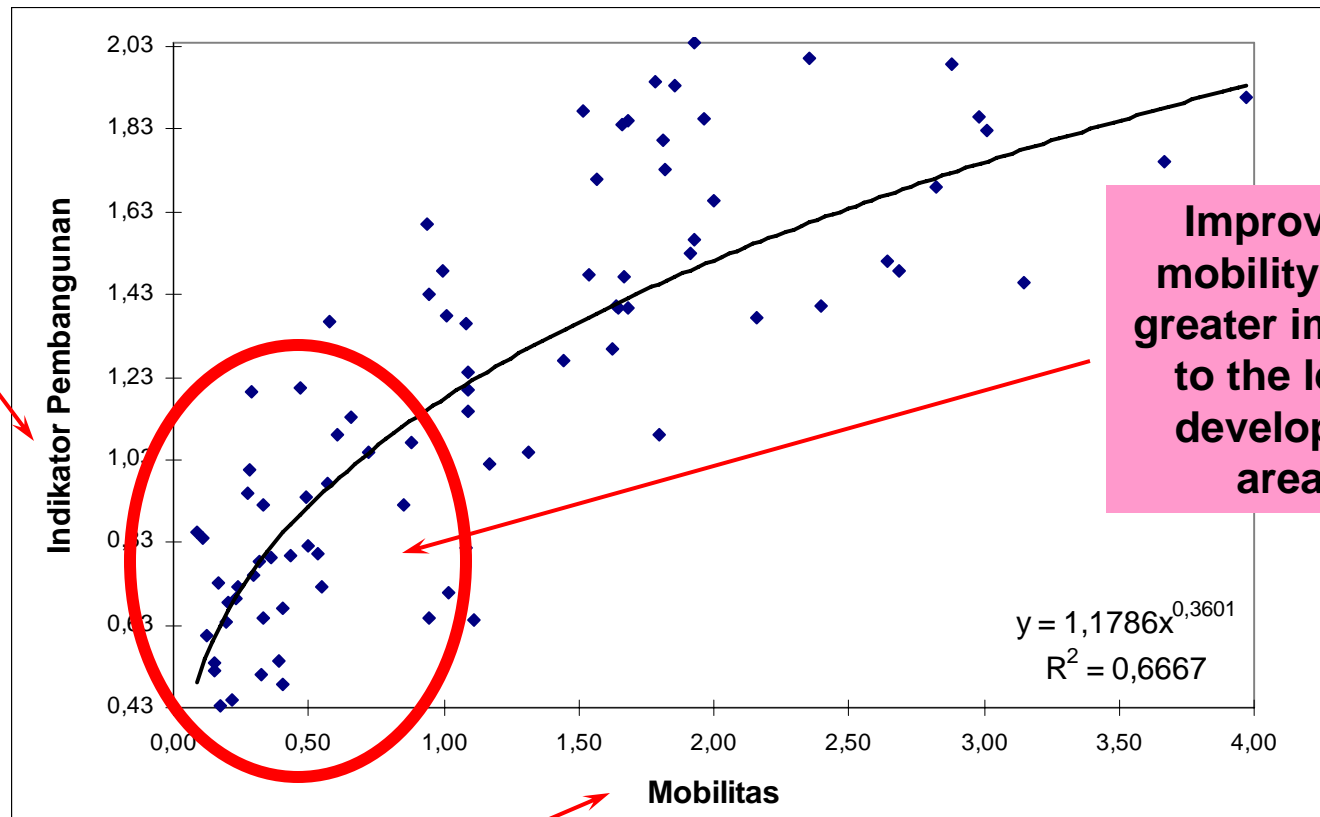


- MDG 01: To eradicate extreme poverty and hunger
- Transport access provides opportunity for rural community to engage in the economic activities
- Transport investment both facilitates access to employment and is an employer, for example through labour-based construction and the operation of transport services
- Indonesian case study (2000) demonstrates that transport constitutes 20 – 25% of rural/traditional agriculture products market price, but <5% of modern agriculture industry market price



# DEVELOPMENT PULL-EFFECT OF RURAL TRANSPORT IMPROVEMENT

Composite development indicator =  $f$  (physical, social, economic)



Source: Maghribi and Parikesit, 2004

Composite mobility index =  $f$  (time, distance, load)



# TRANSPORT ENABLES RURAL COMMUNITY TO ACCESS OPPORTUNITY OUTSIDE THEIR VILLAGE

| No | Country   | Number of trips |            | Time required |            | Load     |            |
|----|-----------|-----------------|------------|---------------|------------|----------|------------|
|    |           | Internal        | External   | Internal      | External   | Internal | External   |
| 1  | Indonesia | 84%             | <b>16%</b> | 44%           | <b>54%</b> | 21%      | <b>79%</b> |
| 2  | Ghana     | 93%             | 7%         | 56%           | 44%        | 76%      | 24%        |
| 3  | Zambia    | 91%             | 9%         | 80%           | 20%        | 81%      | 19%        |

Source: Silviani, 2000

Larger external trips indicates more social and economic interaction and hence higher opportunity to add value to their travel



# LOCAL INNOVATION THAT MATTER



Source: *Practical Actions Nepal Homepage*, accessed 21/08/2008



Source: *Parikesit*, 2003

*Gravity ropeways*

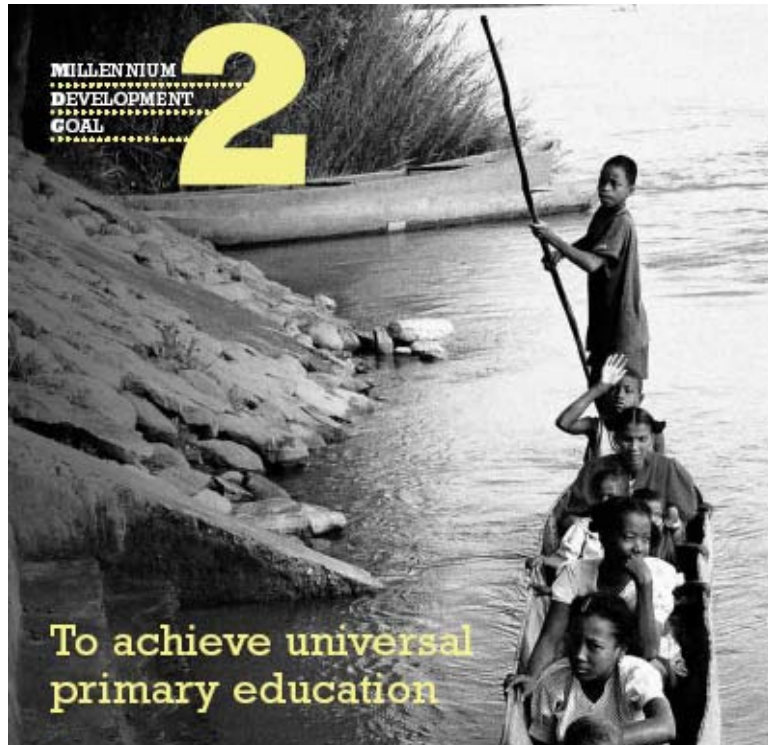
*Bicycle ambulance*

*Trail bridges*

*Combined boat-motorcycle*



# TRANSPORT AND MDG (2)



*Ongoing child-centred research conducted by child researchers and facilitated by the University of Durham in Ghana, South Africa and Malawi, offers real insights into the mobility constraints faced by children as they travel to school (Porter, 2007)*

- MDG 02: To achieve universal primary education
- Transport facilitates the reduction of drop-out rates and increase the quality of teachers
- Morocco case study:
  - No paved road, 21% of girls and 58% of boys attended school.
  - Paved road, the participation rate 48% for girls and 76% for boys.
- Example of PMGSY
  - Presentation of Mr. Annirudh (2008)



# SMALL INVESTMENT THAT MATTERS

**Table 4. Selected Human Development Indicators and Road Access.**

| Indicator                                      | Villages with all-weather motorable roads | Villages without all-weather motorable roads |
|--|---|--|
| Girls Net Primary School Enrollment Rate (NER) | 41%                                       | 27%  |
| Boys Net Primary School Enrollment Rate (NER)  | 56%                                       | 49%  |
| Females Literacy Rate (10 years and above)     | 23%                                       | 13%  |
| Males Literacy Rate (10 years and above)       | 53%                                       | 44%  |
| Immunization Coverage <sup>(1)</sup>           | 54%                                       | 46%  |
| Contraceptive Prevalence Rate <sup>(2)</sup>   | 19%                                       | 12%  |
| Pre-natal consultation                         | 28%                                       | 14%  |
| Births assisted by skilled attendant           | 58%                                       | 39%  |
| Births at home                                 | 85%                                       | 91%  |
| Post-natal consultation                        | 7%  | 5%   |

<sup>(1)</sup> Fully immunized 12-23 months based on recall and record.  
<sup>(2)</sup> Percentage of married women of age 15-49 who ever used contraception.  
Source. PIHS 2001-02.

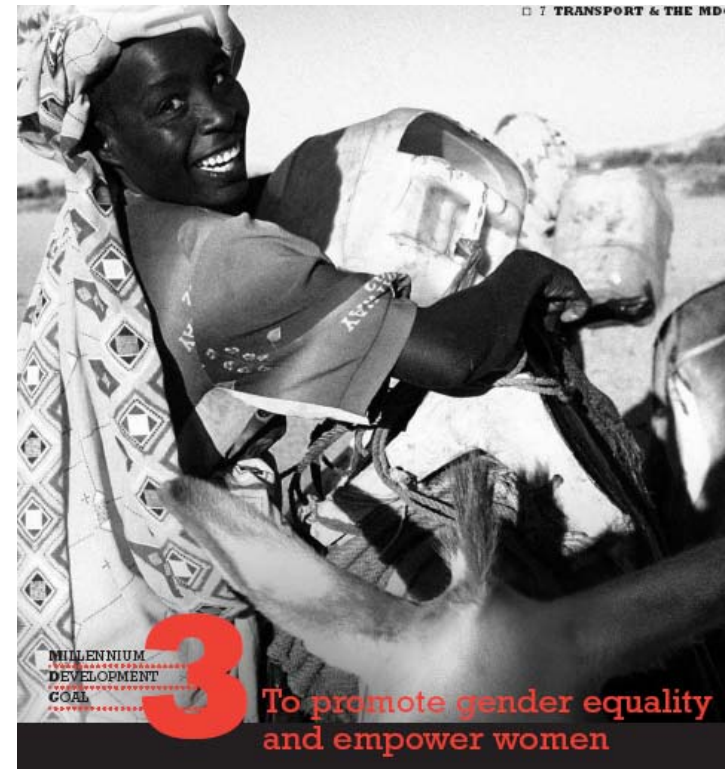
Quoted from: Shakoor et.al, 2007

Improved access creates opportunity for children to participate in education process, improve maternal health and reduce infant mortality



# TRANSPORT AND MDG (3)

- MDG 03: To promote gender equality and empower women
- Empirical evidence (ILO, IFRTD) suggests that:
  - Women travel more, longer and carry heavier load than men
  - Men as the household leader have primary access to vehicle and IMT (intermediate means of transport)
  - Transport infrastructure and modes often not universally designed for men and women

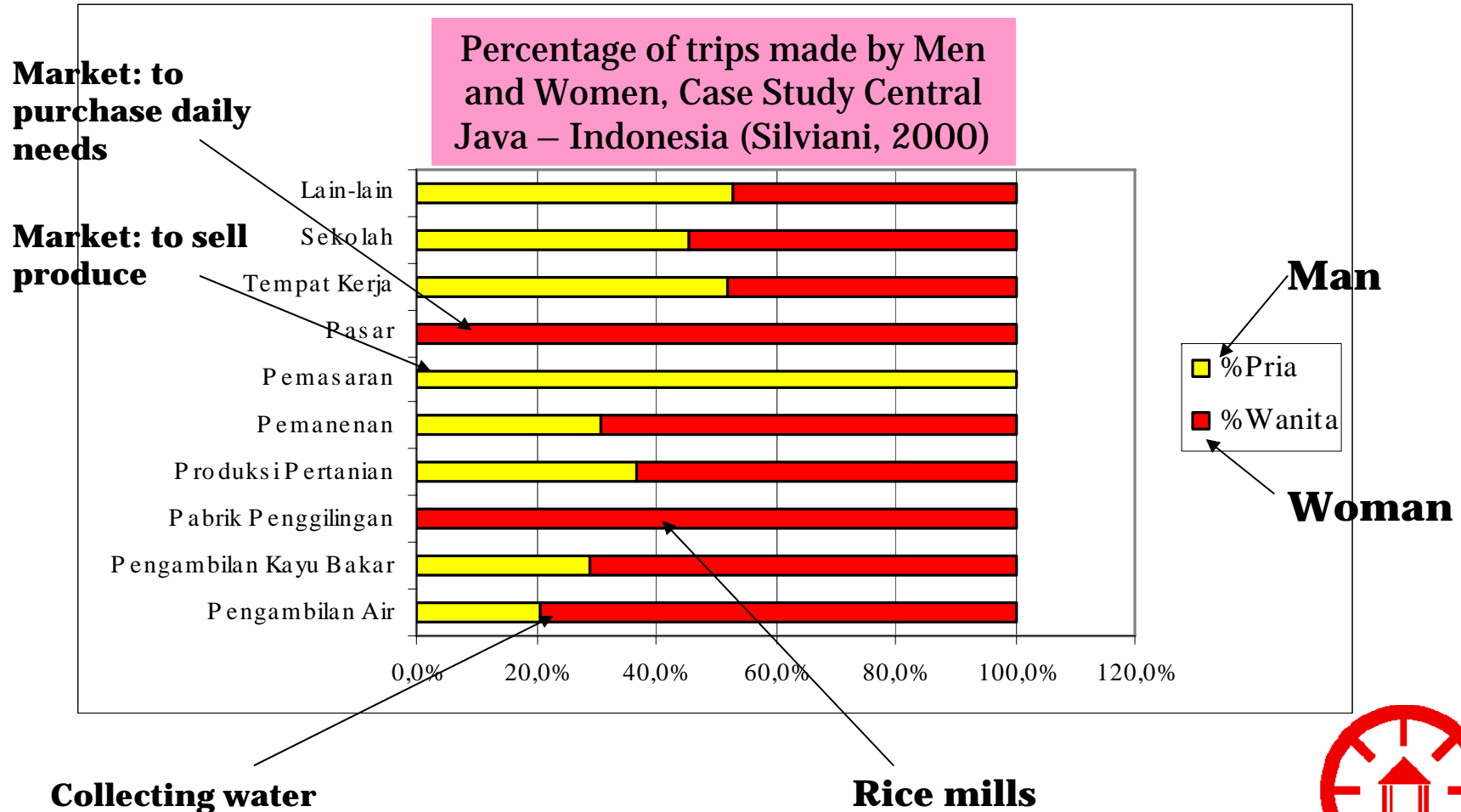


*The Bayam Salam Women, rural entrepreneurs in Cameroon, have been found to be more susceptible to bribery at road-blocks as they are forced to sit on the roofs of taxis to protect their merchandise. This leaves them more 'accessible' to officers. They are also exposed to sexual harassment when using community paths to access suppliers, and to sexually transmitted diseases, including HIV/AIDS, because transport operators frequently demand sexual favours in return for seats (Meli 2007).*

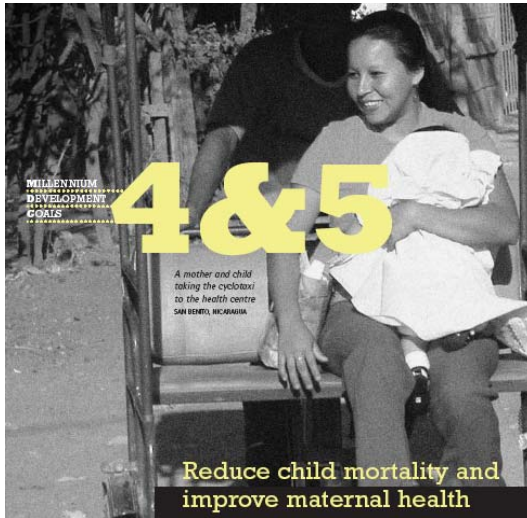




# BALANCING THE LOAD: TRANSPORT AND GENDER



# TRANSPORT AND MDG (4)

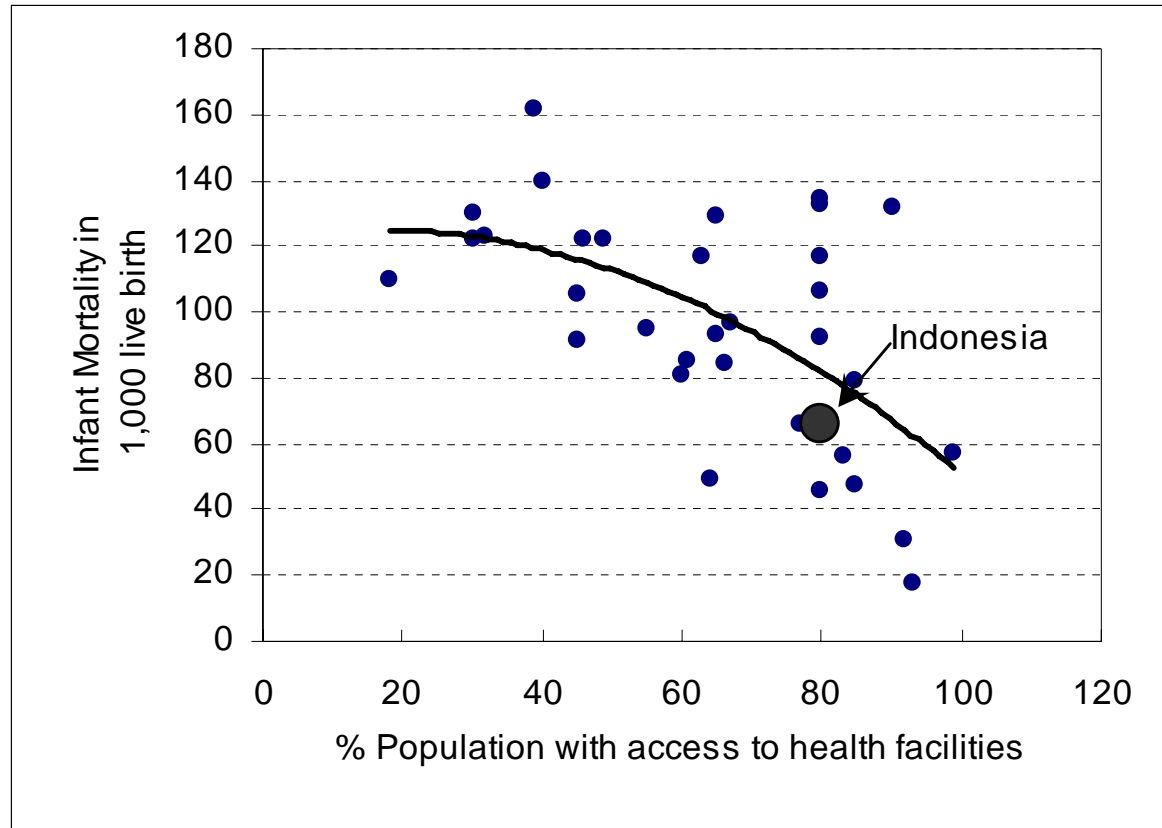


*In Dowa, Malawi, the introduction of eRanger motorbike ambulance doubled district-wide facilitated deliveries. Maternal mortality rate dropped by almost half in the first 12 months (Czuczman, 2007).*

- MDG 04 and 05: Reduce child mortality and improve maternal health
- More than 60% of people in poor countries live more than 8km from a healthcare facility
- A clear association between infant, child, and maternal mortality rates and distance to healthcare services.
  - Cebu Case (the Philippines) Study:
  - In a study from Cebu in, a 10% increase in distance from a hospital was associated with a 2% increase in all three mortality rates.



# TRANSPORT AND MDG (5)



**Infant Mortality and Access to Health Service in 34 Developing Countries, 1985-1995**

*(source: Edmonds, 1998)*



# TRANSPORT AND MDG (6)



- MDG 06: To combat HIV/AIDS, malaria and other diseases
- African and South Asian case studies demonstrates the strong link between dispersion of HIV/AIDS and the advances of transport corridors
- 25 case studies in Latin America, Asia and Africa to research links between mobility and health from different perspectives:
  - Should consider southern, low-income settings
  - Poor coordination between health and transport sector
  - Health services access in rural areas
- Already some but limited initiatives:
  - Healthy Highway Project (India)
  - Azerbaijan Highway II Project



# SUSTAINED HIV/ AIDS PREVENTION AND MITIGATION IN THE AZERBAIJAN HIGHWAY II PROJECT

- ***Drafting contractual obligations***
- *Tendering contractors required have in place:*
  - *Staff HIV & AIDS Sensitisation Plan*
  - *Local Employment Development Plan*
  - *End of Projects Livelihoods Linkage Plan*
  - *Policy on gender equity, confidentiality discrimination & stigmatisation*
  - *Plan for monitoring and evaluating HIV & AIDS activities.*



**SCIH** Swiss Centre for  
International Health

*Source: Molesworth, 2007*



# TRANSPORT AND MDG (7)



To develop a global partnership for development

- MDG 07: To ensure environmental sustainability
- The use of bio-engineering for slope protection experimented in the Nepal is well documented (DFID, 1998) but replication is rare
- Rural transport has huge potential for minimizing its externalities and developing environmentally sustainable technologies

*Good practice examples:*

*Green roads and gravity ropeways in Nepal.*

*Promotion of more sustainable public transport, non-motorised vehicles and the development of traditional waterways*

- MDG 08: To develop a global partnership for development
- forges a life-link between rural communities and their markets, puts isolated people in touch with their representatives, sustains important social networks and empower communities and individuals by delivering freedom of movement

*IFRTD is an example of global advocacy network to mainstream developing countries' perspectives*



**KNOWLEDGE GAPS:  
WHAT 15-YEARS OF NETWORKING HAS  
TAUGHT US? WHAT WE STILL DO NOT KNOW?**

- **Understanding how rural transport works**
  - Economic and social development of rural transport
    - Transport and rural off-farm activities: Transport and rural investment
    - Transport and disability
    - Cross border trade and transport corridors
    - Rural transport hubs
  - ICT and rural mobility
  - Rural transport and global effort to face disaster (natural disaster, climate change, human conflict)
    - Accessibility for disaster prevention
    - Improving mobility and ethnic/cultural relation



# KNOWLEDGE GAPS: WHAT 15-YEARS OF NETWORKING HAS TAUGHT US? WHAT WE STILL DO NOT KNOW?

- **Providing the solution (technical, management, finance)**
  - Approach, methodology and guideline:
    - Capacity for local government and local actors (contractors, consultants, CSO/NGO) to adapt and incorporate them into the government process and standards
- **Check and balances**
  - Decentralized governance and its impact on rural transport
  - Advocacy and partnership
    - Sensitizing international donors
    - Media awareness
    - Partnership with development organizations and NGOs
    - Capacity improvement NGO/CSO and local community to make a change





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