

INCLUDING AN ENVIRONMENTAL DIMENSION INTO MULTIDIMENSIONAL POVERTY MEASUREMENT



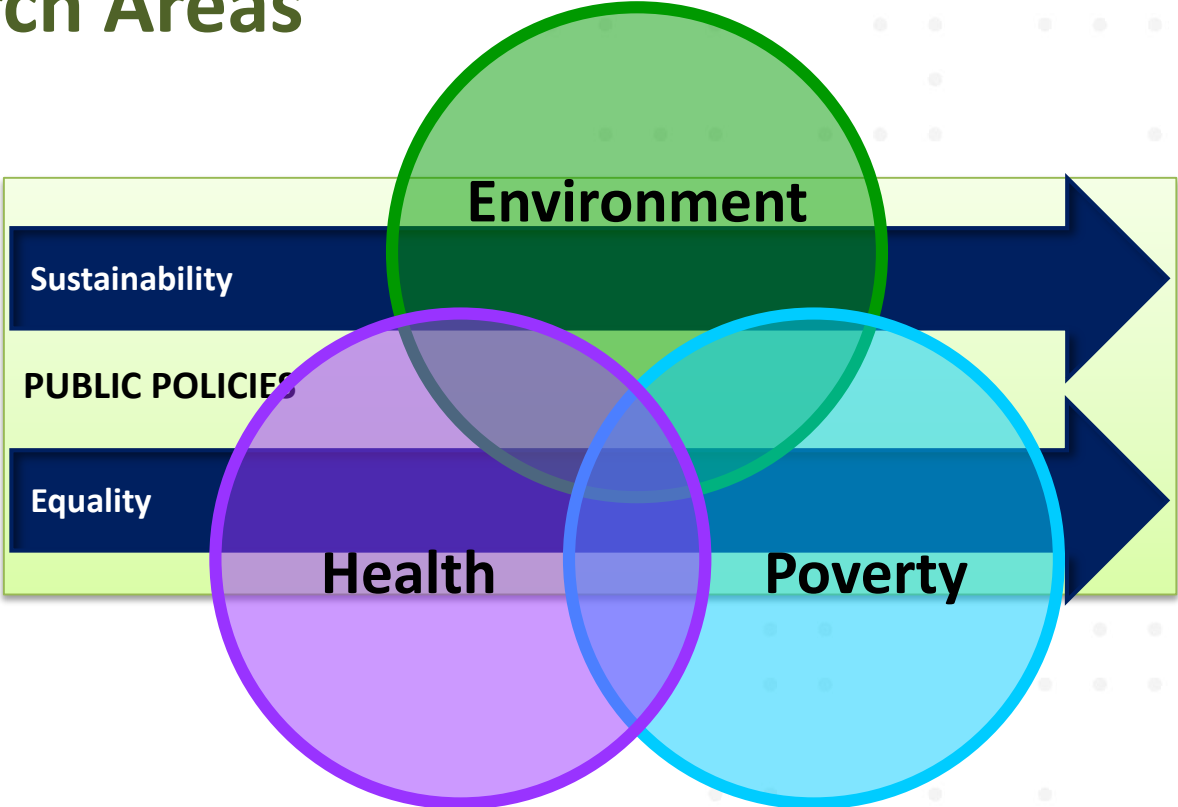
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Investigación con impacto Social

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EQUIDE

Research Areas



Recent projects

- Financial inclusion in the Prospera Federal Program
- Extent and potential evaluation of Social Economy in Mexico
- Impact evaluation of the Opportunities Federal Program on health and income
- Economic evaluation of the National Protected Areas System

BACKGROUND

Motivation

- Sustainable Development Goals
- Current economic and financial crisis globally demands a deeper and more integral analysis on who is poor, who is likely to become poor as well as its causes and consequences

Poverty Beyond Income

- The limitations of using income as the sole proxy of welfare, have been questioned for several decades now
- Social Indicators Movement (Andrews and Withey, 1976; Andrews et.al., 1989; Vogel, 1984).
 - Doctors per inhabitant,
 - Literacy rate,
 - Life expectancy,
 - Disease incidence

Multi-dimensional Poverty

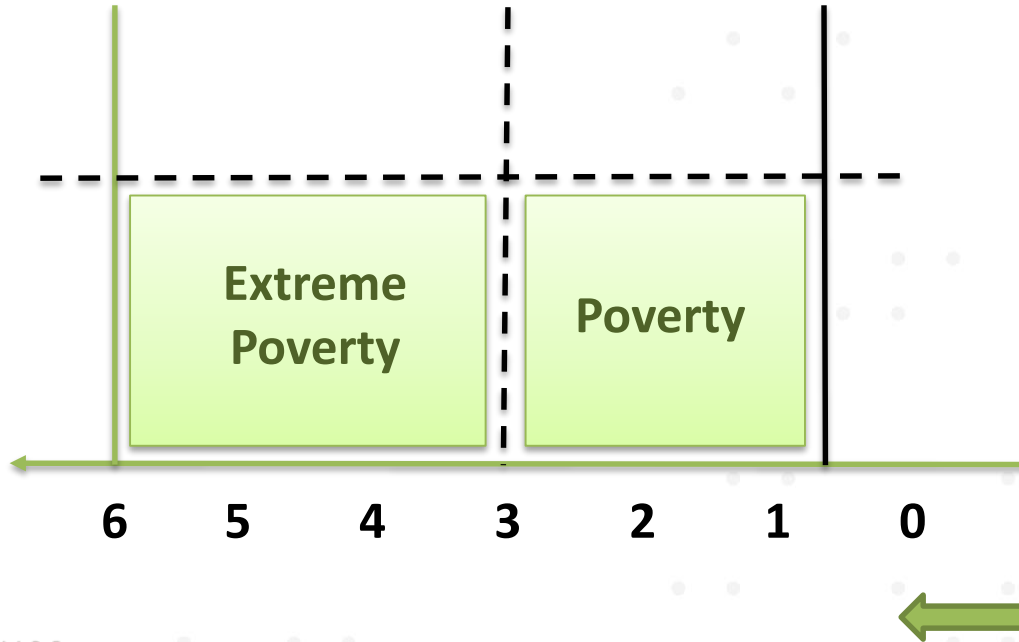
Conceptualization and Measurement

- Multidimensionality from a needs-based perspective (Altimir, 1979, Boltvinik, 1992)
- Multidimensionality from a rights-based perspective (UNDP, 1997).
- Mexico, Chile and Colombia are front-runners.

Multi-dimensional Poverty Measurement in Mexico



Income
Welfare Line
Rural: \$ 1,614
Urban: \$ 2,542



6 shortcomings to social rights:

- Education
- Health
- Social security
- Housing
- Basic services
- Food security

Rules of thumb:

1. Shortcomings are to be evaluated through binary variables
2. All rights need to be weighted similarly
3. The lack of fulfilment to any social right is considered an absolute shortcoming in the wellbeing of a household

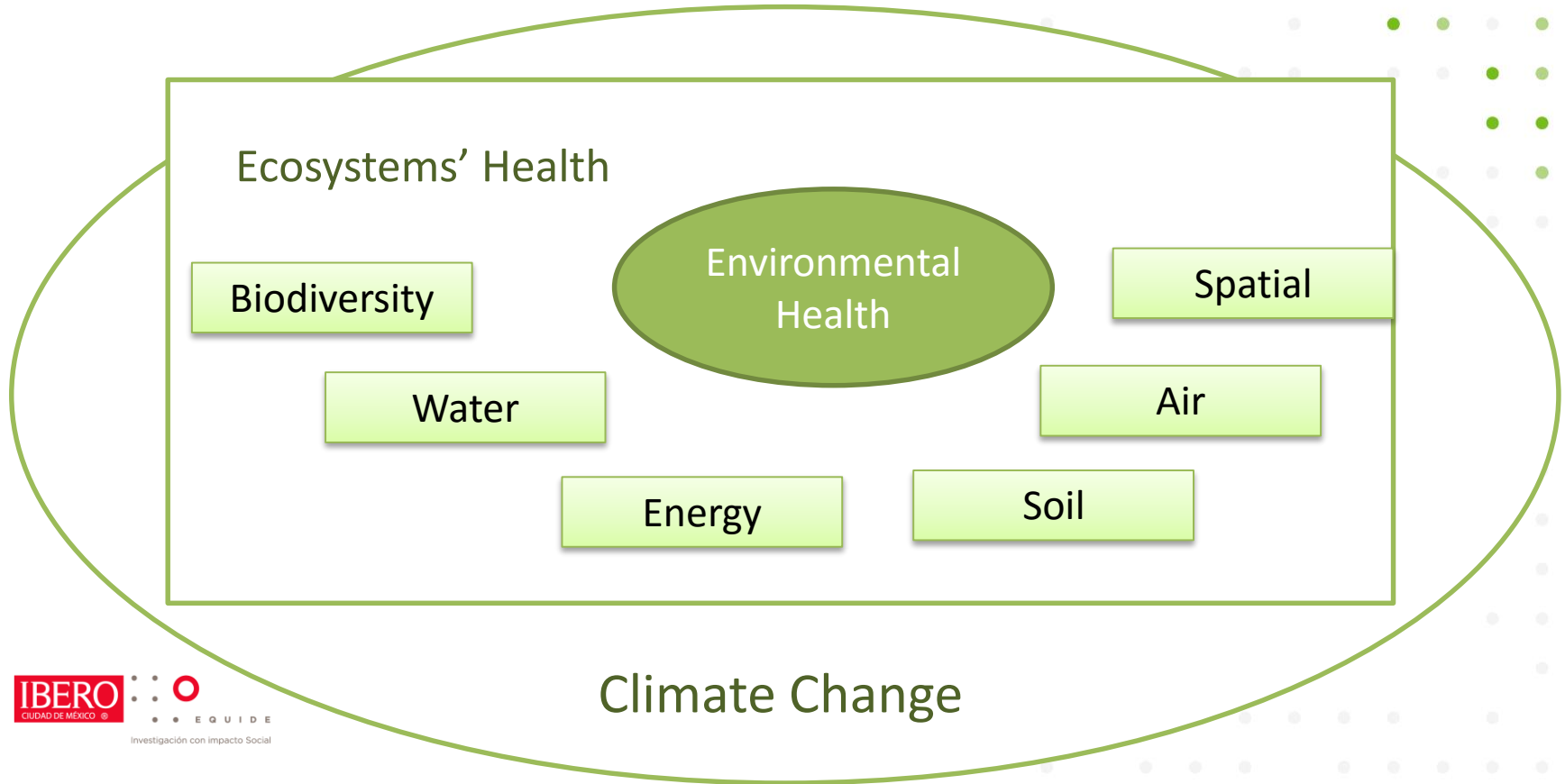
Example: Does the household live less than 2km away from the nearest clinic? Yes = 1 / No = 0

2011 Constitutional Reform

*“All Mexicans have the right to a **healthy environment** for their welfare and development ...” ... The state should ensure children’s rights to **food, health, education and recreation**”*

PROPOSAL

Conceptual Model



Environmental Poverty

Ecosystem Poverty

1. Water poverty
2. Energy poverty
3. Biodiversity poverty

Environmental Health

4. Respiratory health
5. Spatial health
6. Sanitation health

Three criteria:

Effective Access, Quality and Continuity

1. Water Poverty

WAT_POV_I $\left\{ \begin{array}{l} 1 \quad \text{if } Wat_acc = 1 \text{ or } Wat_effacc = 1 \text{ or } Wat_qual = 1 \\ 0 \quad \text{otherwise} \end{array} \right.$

2. Energy Poverty

EN_POB_I



1 if $Ener_acc = 1$ or $Ener_eff_acc = 1$ or $Ener_qual = 1$

0 otherwise

3. Biodiversity Poverty

POB_BIOD_I

1 if Biod_dep = 1 and, Biod_qual = 1 or Biod_eff_acc = 1

0 otherwise

4. Poverty by lack of Respiratory Health

I_POB_RES_HEA

1 if $Air_ext_qual = 1$ or $Air_int_qual = 1$

0 otherwise

5. Poverty by Spatial Marginalization

I_SPAT_MARG

*1 if $Trans_time = 1$ or $Mov_acc = 1$ or $Mov_acc_dis = 1$
and/or in terms of noise or recreation, it has both shortages
 $Recreat_av = 1$ and $Noise = 1$*

0 otherwise

6. Poverty by Insalubrity

I_POV_SAL

1 *If waste_disp=1 or dist_op_dump=1 or tox_waste=1*

0 *otherwise*

ENVIRONMENTAL POVERTY

SC_ENV_POV

1. *if $I_WAT_POV = 1$ or $I_EN_POV = 1$ or $I_BIO_POV = 1$ or $I_POV_RES_HEA = 1$ or I_SPAT_POV or $I_POV_INSAL = 1$*

0 otherwise

7. Vulnerability to poverty due to climate change

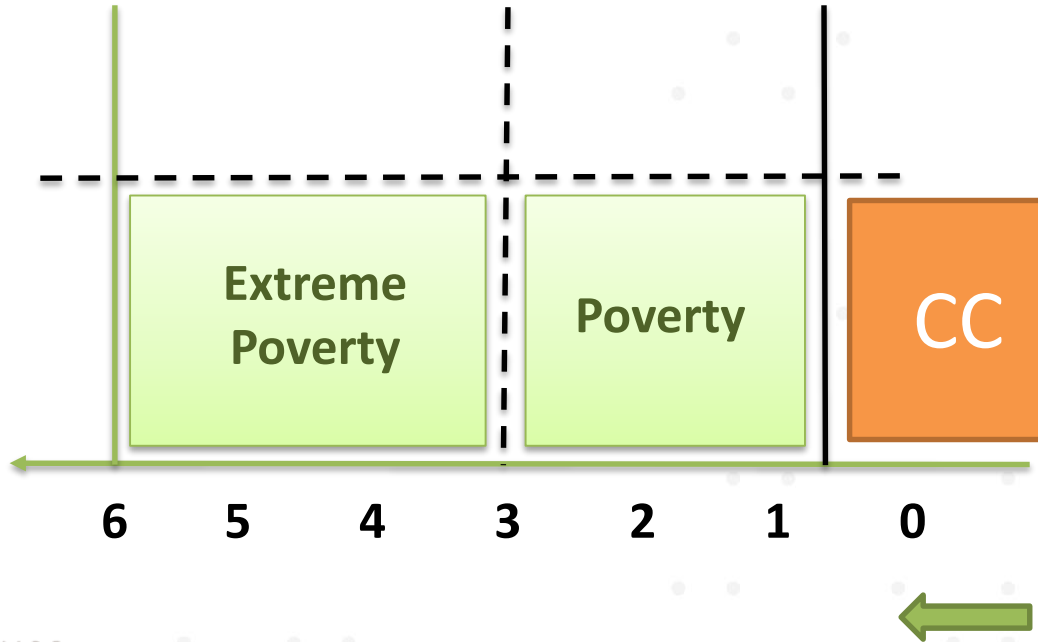
IN_VUL_POB_CC

if $Exp_{cc} = 1, 2, 3$ or 4 and $Sens_{cc} = 1, 2, 3$ or 4 and $Cap_{adap_{cc}} = 1$

0 otherwise

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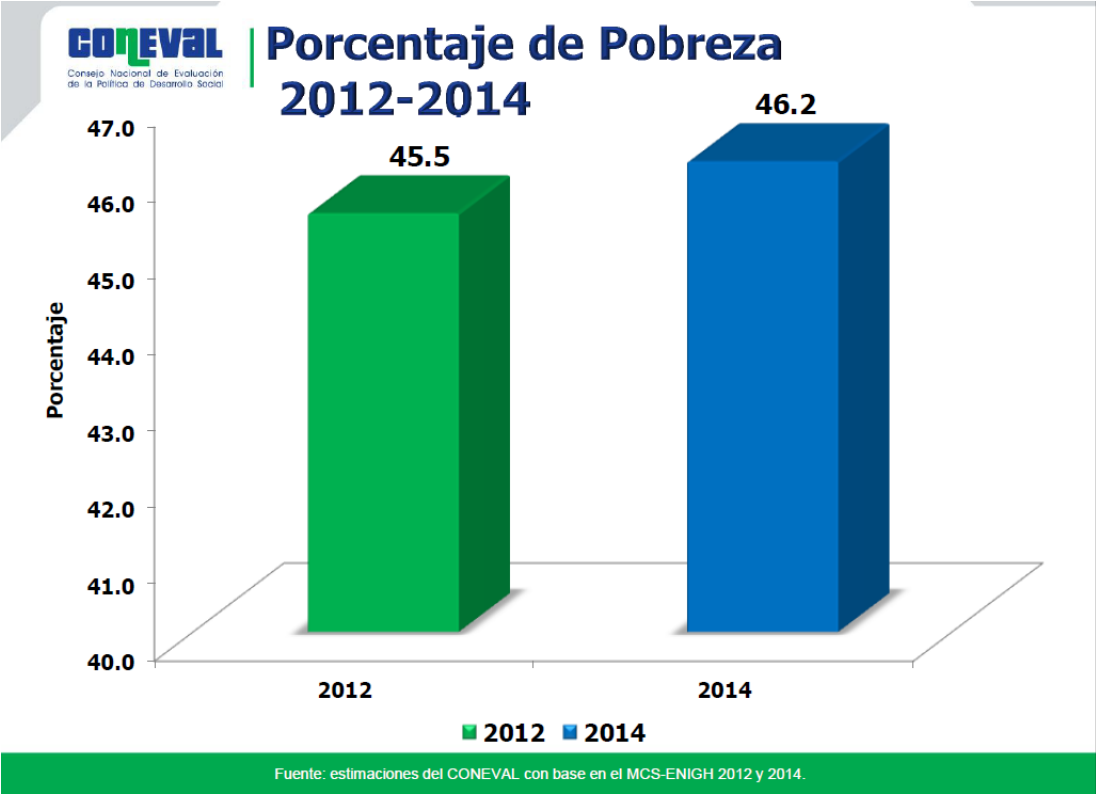


6 shortcomings to social rights:

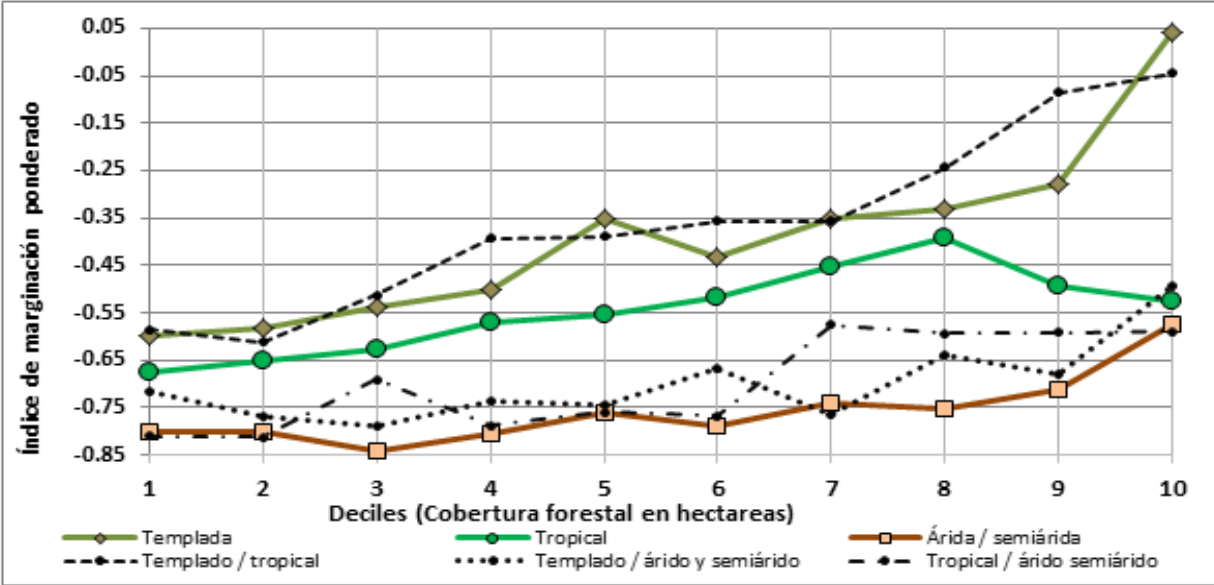
- Education
- Health
- Social security
- Housing
- Basic services
- Food security

WHY IS THIS IMPORTANT

Poverty measurement in Mexico



Poverty and Environment



Government Responses

- Special Economic Development Zones in the South-East
- Disproportional budgetary cuts to the environmental sector

MUCHAS GRACIAS



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