# Gender, Renewable Energy, and Climate Change

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# Outline of presentation

- Facts: Disparities between women and men on climate change impacts and energy access
- Definitions and Changing perceptions
- Framework to look at Gender Equality and Equity in RE and CC
- Opportunities from Renewable energy: continuum of solutions for both mitigation and adaption investments while increasing opportunities for access
- Economic Opportunities for women and men in RE/Climate Change investments
- How to make it happen
- Conclusions

# Gender and Climate Change: some basic facts (1)

Disparities in CC impact on women and men, due to (Nelson 2011):

Land rights
Division of labor
Existing knowledge systems and skills regarding CCA
Power and decision-making
Embedded inequalities in policies and institutions, both formal and informal
Perceptions of risk and resilience

Examples

- Climate change impact on sea-level rise affects differently gender-based professions, e.g. fishing for men, agriculture for women in coastal areas
- In case of CC-related extreme events: women take longer than men to recover economic standing from losses; on hypothesis is that men have more direct access to relief
- More women than men die from extreme events ➔ Men confronted to new social and family obligations as caregivers
- Women are under-represented in CC adaptation, mitigation and recovery planning, decision-making, and skills training (e.g. Pakistan Earthquake Recovery Program: only 27% of women participated in skill training for earthquake-resistant housing reconstruction against a 50% target)

# Gender and Climate Change: some basic facts (2)

- Impact on women and men's time use
- Impact on Women and men's health, in particular from water contamination

# Definitions and Changing Perceptions

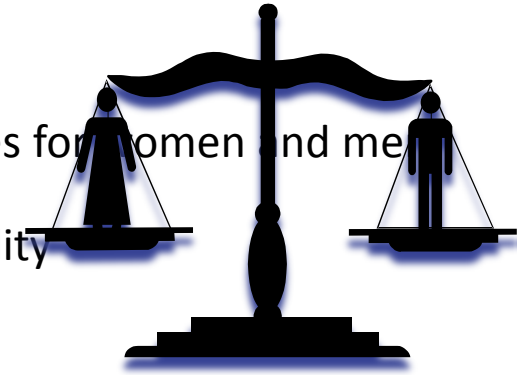
- Definitions

**Gender** refers to how societies and specific cultures assign roles and ascribe characteristics to men and women on the basis of their sex.

**Gender** is both women and men, not only women

**Gender equality**: equal rights, power, responsibilities, and opportunities for women and men, equal consideration of their interests, needs, and priorities

**Gender equity**: process of removing barriers to/achieving gender equality



- Changing perceptions

**Women are assets**: stop including women as "vulnerable groups". In fact: Women's resilience and adaptation leadership is well demonstrated (e.g.Wangari Maathai, Nobel Peace Prize 2004, Green Belt Movement).

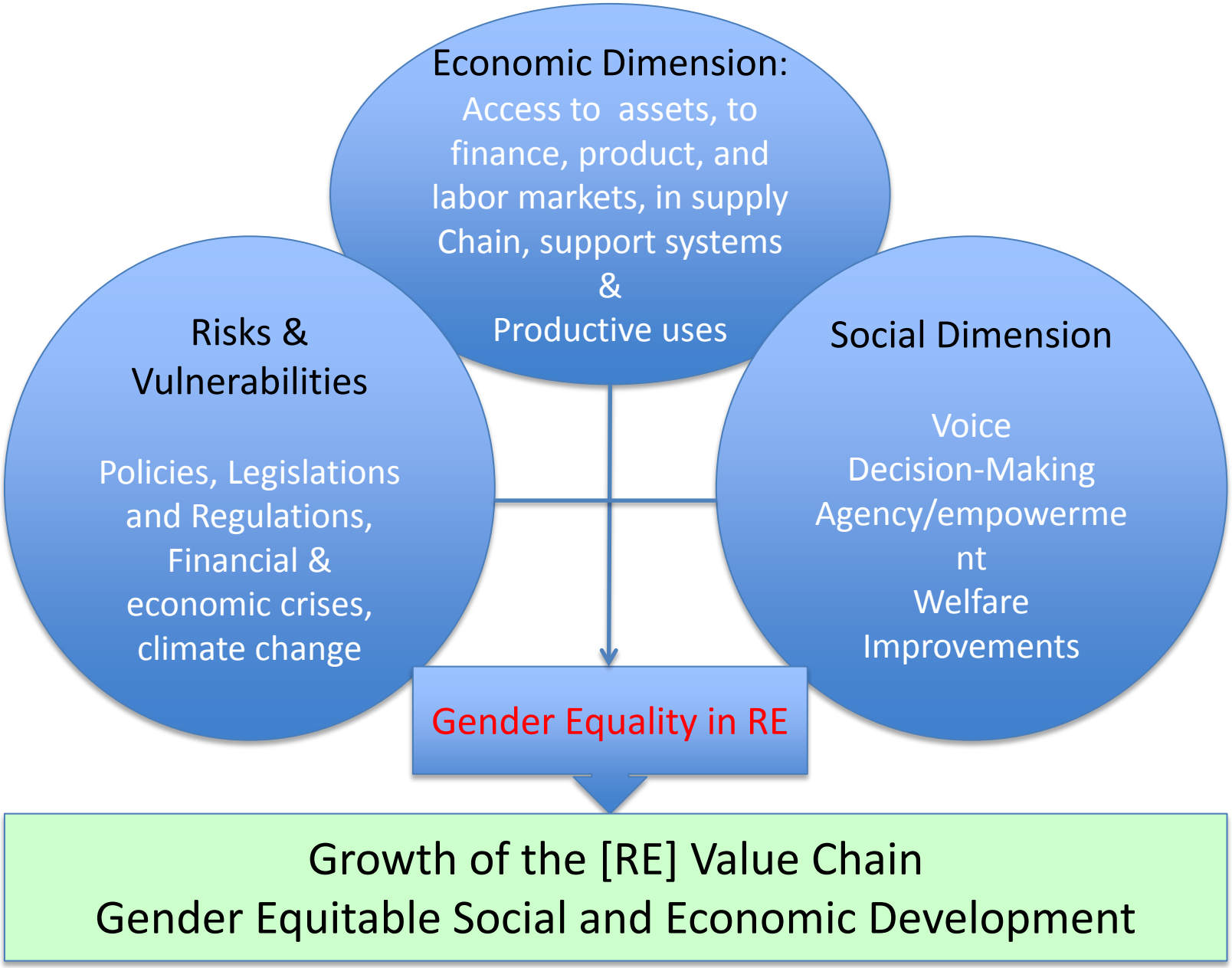
'Stakeholders' Consultations' is not enough to achieve gender equality. Full participation of women and men at all levels and in all activities on climate change adaptation and mitigation is indispensable.

Advocacy is not enough. Progress on gender sensitivity is slow

**Holistic approach needed**: from Policy to results on the ground.

**Increasing demand from civil society and funding agencies to integrate/mainstream gender** in policies/programs and projects.

# Understanding Gender Equality and Equity in [RE]



# Energy: on Critical Path of Climate Change

## ENERGY CONSUMPTION AND PRODUCTION IS ONE OF THE MAIN CULPRITS OF CC

DEMAND SIDE

ENERGY = ONE OF THE MAIN MOTORS OF SUSTAINABLE ECONOMIC AND SOCIAL DEVELOPMENT & ONE OF THE MOST EFFECTIVE TOOLS TO COMBAT POVERTY

- Basic needs (cooking, lighting, power, transport)
- Productive activities
- Productivity increases
- Grow household incomes and economies

➔ **Access** to quality and affordable energy considered a **human right** ➔ should be **Gender-equitable access to energy services and supplies.**

➔ **However, disparity between women and men access to energy, both for household needs and business/productive uses.**

➔ **Risks and vulnerabilities to CC of energy consumers**

SUPPLY SIDE: production of usable energy

- Harvesting resources (biomass, sun, wind, river waters)
- Extracting resources (coal, uranium, petroleum, gas)
- Transforming natural resources

➔ GHG emissions ➔ CC ➔ risks and vulnerabilities for energy infrastructure and services

➔ Gender disparities in risks and vulnerabilities to CC throughout the supply chain (more male worker accidents in wind harvesting and extractive industries; loss of land for hydro)

# Renewable Energy (RE) & Climate Change
# Win-win solutions for CC Adaptation & Mitigation

Merits of RE

- continuum of resources, technologies, and scale
- ➔ multiple'local' solutions, favorable for access.
- GHG emissions avoided: 1.2 billion tonsCO2 in 2013 from new RE investments
- *However, to date, more work done on mitigation in power than on adaptation.*

RE investment trends

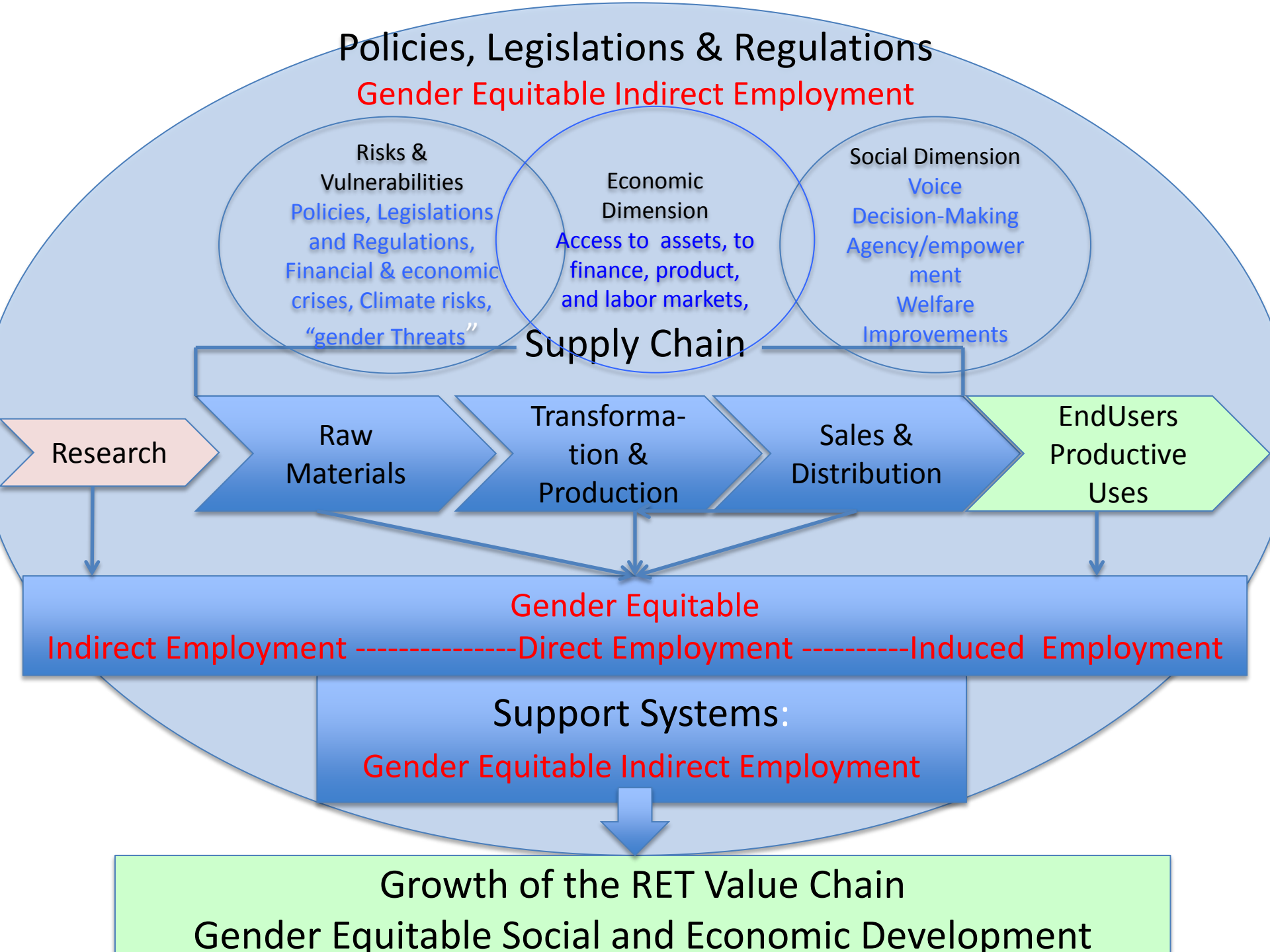
- RE for power and fuels (excluding large hydro-electric projects) fell in 2013, reaching **$214 billion** worldwide, some 14% lower than in 2012 and 23% below the 2011 record.
- However: renewable energy excluding large hydro made up 43.6% of the new power capacity added in all technologies in 2013
- Regional Variations: China, US & Brazil (down), Japan, India (up), Latin America (excl. Brazil) up.
- ➔ Unit costs down for solar PV and wind ➔ more capacity
- ➔ **$214 billion of investments = tremendous economic and social opportunity for W & M**

Beware of risks and vulnerabilities

- Wood/charcoal: can be sustainable, high vulnerability to CC (droughts)
- Biofuels: need careful management
- Hydro: small-or-large-scale: needs careful management. High vulnerability to CC
- Wind: small and large scale (Vulnerability to CC?)
- Solar: small and large scale (CSP costs?)
- Other: Tide energy, Fuel cells (?)
- ➔ High vulnerability to CC
- ➔ **High regulatory risks for the industry**

# Opportunities for gender equality throughout the RE Value chain

| **DEMAND SIDE**<br><br>**Access to energy services:**<br><br>**-- Cooking and heat energy for households: Give Figures**<br>**-- Lighting, heat and power for small-and large scale enterprises and businesses**<br>**-- Lighting, heat and power for commerce and trade**<br>**-- TRANSPORTATION** | **SUPPLY SIDE**<br><br>**Employment and Business Creation**<br><br>**-- Research, development**<br>**-- Harvesting**<br>**-- Transformation**<br>**-- Sales**<br>**-- Disposal** |
|---|---|
| Are Women and Men's needs similar or Different?<br>Gender sensitivity in Choice of Technology? | Do women and men have similar skills?<br>Have women and men equal opportunity for entry into RE job market?<br>Do women and men have equal access to assets and finance? |


Policies, Legislations & Regulations
Gender Equitable Indirect Employment
Risks & Vulnerabilities
Policies, Legislations and Regulations, Financial & economic crises, Climate risks, "gender Threats"
Economic Dimension
Access to assets, to finance, product, and labor markets,
Social Dimension
Voice
Decision-Making
Agency/empowerment
Welfare Improvements
Supply Chain
Research
Raw Materials
Transforma-tion & Production
Sales & Distribution
EndUsers Productive Uses
Gender Equitable
Indirect Employment ----------Direct Employment ---------Induced Employment
Support Systems:
Gender Equitable Indirect Employment
Growth of the RET Value Chain
Gender Equitable Social and Economic Development

# Gender Employment in Renewable Energy:

## What do the data tell us?

| | World | Males | | Females | |
|---|---|---|---|---|---|
| | | Numbers | % | Numbers | % |
| Modern Biomass | 753 | 609.93 | 0.81 | 143.07 | 0.19 |
| Biofuels | 1,379 | 1,241 | 0.9 | 137.9 | 0.1 |
| Biogas | 266 | 228.76 | 0.86 | 37.24 | 0.14 |
| Geothermal | 180 | 153 | 0.85 | 27 | 0.15 |
| Small Hydropower | 109 | 88.29 | 0.81 | 20.71 | 0.19 |
| Solar PV | 1,360 | 938.4 | 0.69 | 421.6 | 0.31 |
| CSP | 53 | 47.17 | 0.89 | 5.83 | 0.11 |
| Solar Heating & Cooling | 892 | 686.84 | 0.77 | 205.16 | 0.23 |
| Wind Power | 753 | 564.75 | 0.75 | 188.25 | 0.25 |
| TOTAL | 5,745 | **4558.24** | **0.79** | **1186.76** | **21%** |
| | | | | | |
| Large-scale Hydropower | 891 | 846.45 | 0.95 | 44.55 | 5% |
| Traditional Biomass | 2,250 | 563 | 0.25 | 1,687 | 75% |
| TOTAL | 8,886 | 5967.69 | 0.67 | 2918.31 | 33% |

JOBS







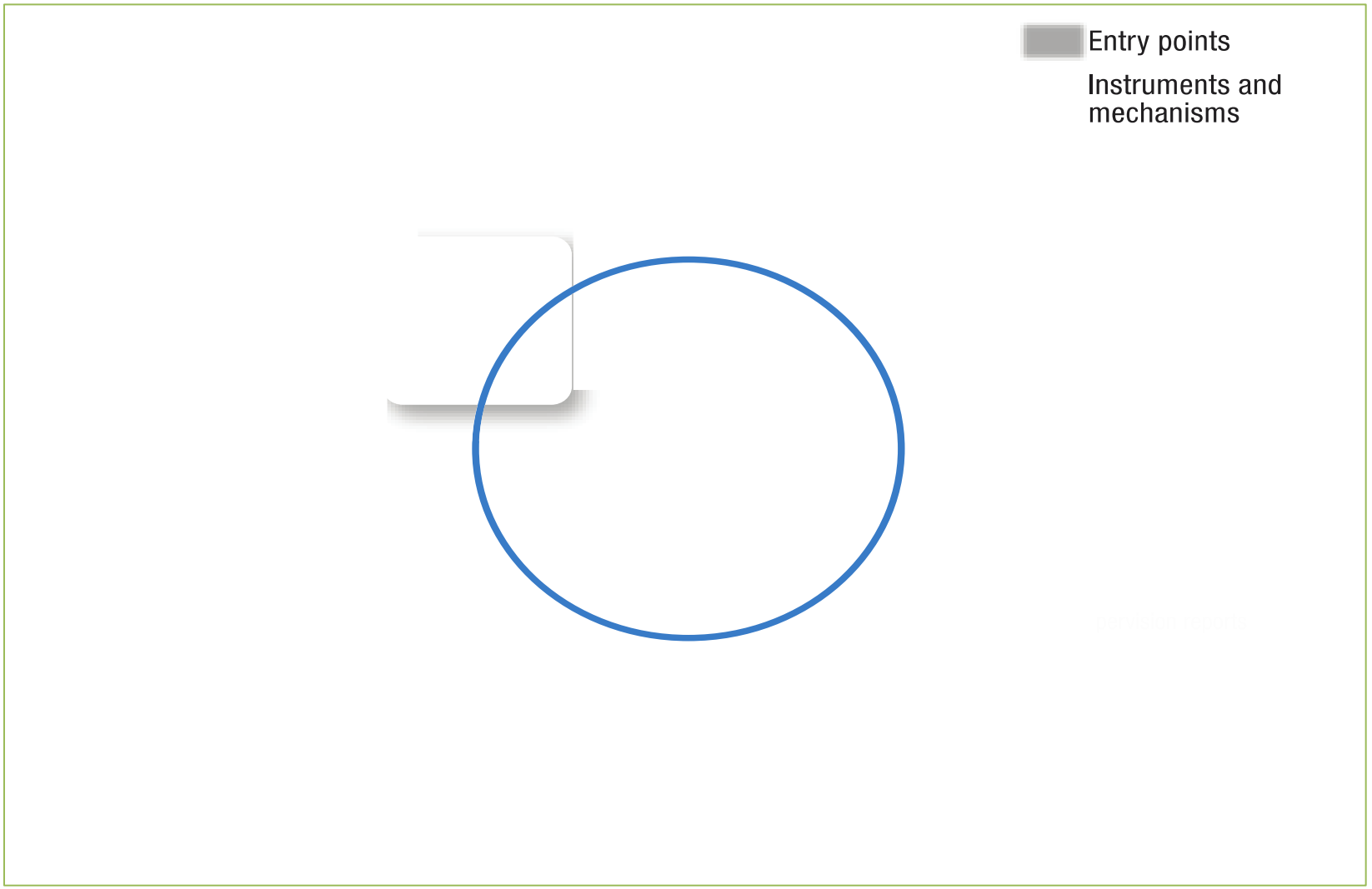
and BUSINESSES

# How to Make Gender Equality in RE and CC Happen? Policies

Six principles for organizations, public or private:

1. Commitment: Mandates (e.g. Green Climate Fund)
2. Inclusiveness: all activities
3. Accountability: from Board to all operational and administrative units
4. Country Ownership: alignment with country policies, regulations, and priorities
5. Competencies: Board and staff training and gender balance
6. Equitable Resource Allocation

# How to make it happen? The Project Cycle



# Senegal: Gender Equitable Household Energy Project

- Project I: gender elements but not equitable

(wood and charcoal for men, forestry products and small livestock for women)

- Evaluation ➔ women left out of the main benefits, but interested in joining in the wood and charcoal supply chain
- Project II (under implementation): designed to associate women throughout the wood and charcoal value chain + monitoring results and impacts

# The road ahead for gender equality, RE and CC: bumpy or smooth? Dark or Bright?

- Gender-disaggregated data Availability?
- Convincing research results for policy formulation?
- Toolkits: available, are they used?
- Field results: available, are they used?
- Budgets: an excuse or a fact?
- Trained practitioners: too few?
- Who is accountable for results?


Bibliographical references

- Aguilar & Al. (2012): Gender Review of the Climate Investment Funds
- USAID-Adapt Asia (2014) Sourcebook on Gender and Climate Change. Energy Chapter.
- IRENA (2013) Renewable Energy and Jobs. Gender Chapter

Schalateck (2014): Of Promise, Progress, Perils & Prioritization

Gender in the Green Climate Fund. Hans-Boëll Foundation.

# Climate Change work is about the future

Give a human face to adaptation and mitigation

Provide solutions which will equally benefit Women and Men?