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# Beyond the Grid: Women's Empowerment in Climate, Energy and Household Well-being

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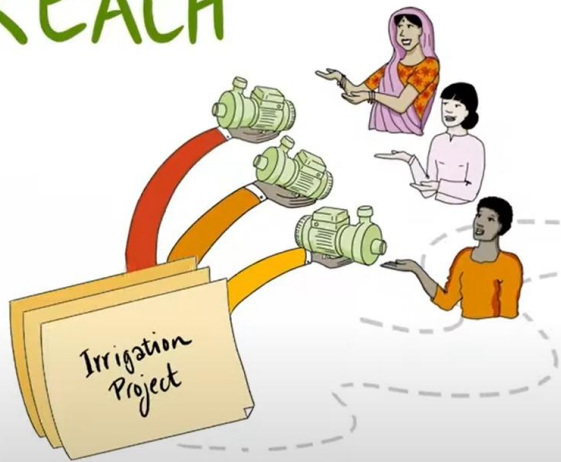


**CGIAR**

**CLIMATE  
ACTION**

# Why empowerment?

REACH



BENEFIT

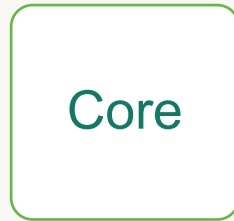
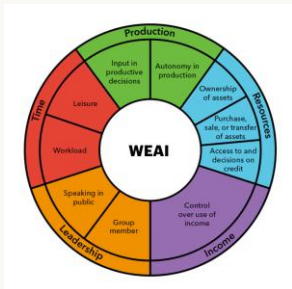


EMPOWER

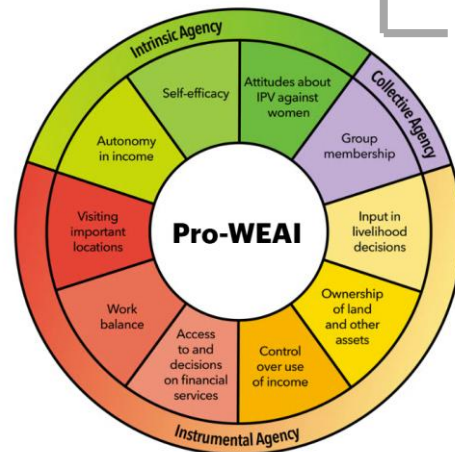


Graphics credit and full video available from the CGIAR Gender Platform: <https://www.youtube.com/watch?v=fLGeZBLpaBY>  
Based on Johnson et al., 2018 "How do agricultural development projects empower women?"

# WEAI Family Tree



Optional add-on modules



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# What's Missing in WEAI?

## Collective Agency

- WEAI focuses on individual decision-making; limited capture of women's collective action and solidarity

## Time Use & Agency Over Time

- Time domain measures workload, but not *agency over how time is allocated*

## Intrinsic Agency

- Self-efficacy, attitudes about IPV, and autonomy in decision-making underrepresented in the original WEAI

## Survey length and respondent fatigue

- Time taken for WEAI, cannot integrate in existing surveys

## Sector Specificity

- Agriculture-centric domains don't translate directly to energy, health, climate or other sectors

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# Addressing the Gaps: Add on modules and new advances

## MAGNET Initiative (World Bank, IFPRI, IRC, Oxford)

- Develops 20+ novel tools for measuring women's agency
- Tools for time use agency, collective agency, self-efficacy etc.
- Tested across multiple countries and sub-regions

## pro-WEAI: Adding Intrinsic Agency

- Added self-efficacy, attitudes about intimate partner violence, and autonomy in decision-making

## WEMNS: Scaling for National Statistics

- Streamlined/shorter for large-scale multitopic surveys; 4 domains with counting-based methodology

## Thematic add-on modules

- Add on modules address project specific priorities- climate change, energy
- Build on existing WEAI modules with suitable modifications

# Proposed Add-on Pro-WEAI indicators: + Climate change

## Indicators of agency to support climate action

### Instrumental Agency:



- Input into climate action decisions
- Control over natural resources (soils, water, forests/trees)
- Decisions over crop insurance
- Input into climate information decisions

### Collective Agency:

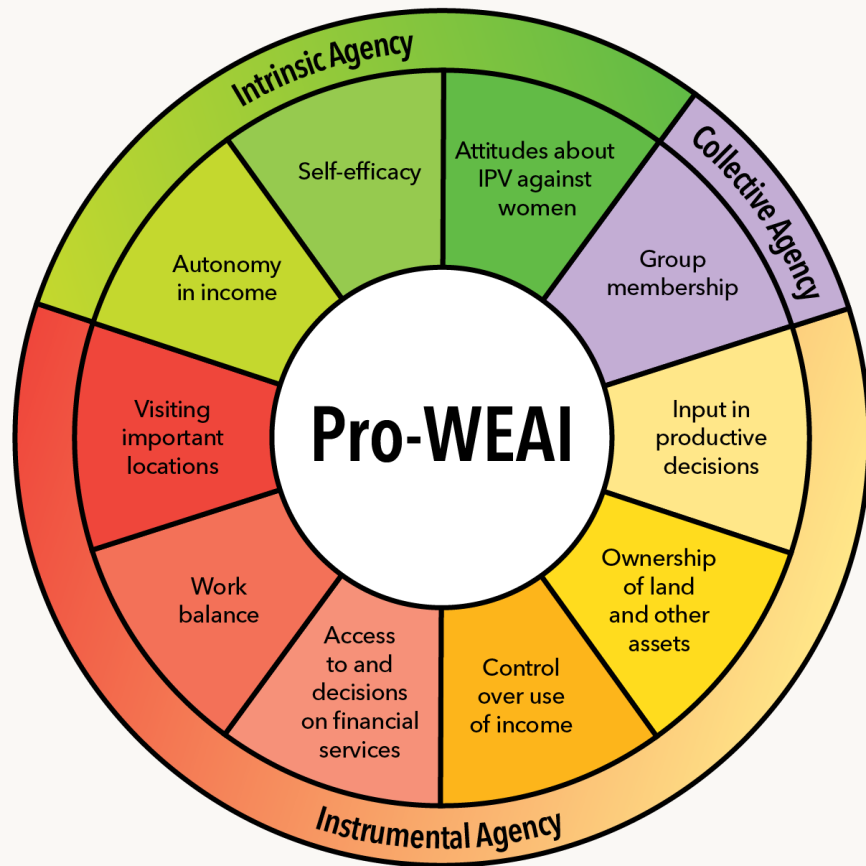


- Community comes together on climate
- Individual participates in and benefits from community climate activities
- Membership in a climate group
- Support for women's/men's community engagement
- Group collective agency

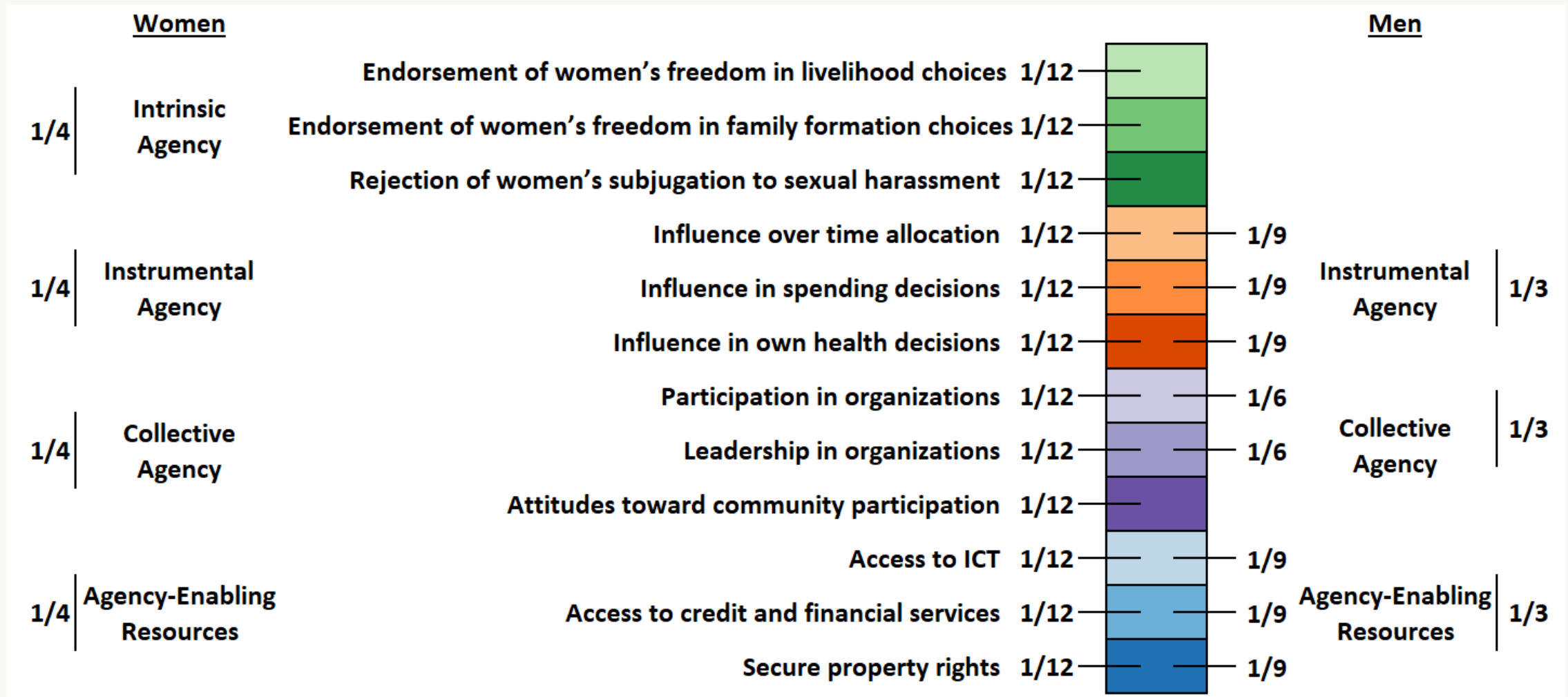
### Intrinsic Agency:



- Autonomy in climate change response
- Confidence in formulating climate response
- Confidence in implementing climate response
- Confidence that climate response will be effective
- No negative affect from climate change



# Calculation of WEMNS



Women's empowerment score is equal to the **weighted average** of 12 binary indicators.

Men's empowerment score is equal to the **weighted average** of 8 binary indicators.

Respondents are identified as **empowered** if they are adequate in at least 60/65/70% of the weighted indicators.

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# Women's empowerment and energy

## Why is it important

- Many day-to-day activities that use energy are activities in which women are engaged, but women bear the costs of unequal distribution of energy.
- Little is known about how intra-household dynamics contribute to the heterogeneous relationship between gender and energy access/use.
- Qualitative studies suggest a vital role of women's empowerment in energy access or use, but empirical evidence is limited.

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# Energy Empowerment Framework

- Access: Women's ability to obtain reliable, affordable, and clean energy sources and energy technologies for both productive and domestic use.
- Individual Agency: Women's power to make strategic choices about energy use, investments, & management in the household, on & off farm.
- Capacity: Women's knowledge, skills, and confidence to utilize energy technologies effectively & participate in energy-related decisions within the home & community.
- Economic well-being: Women's opportunities to generate income, save time, & improve productivity through enhanced energy access.
- Collective agency: Women's representation & active participation in energy-related governance structures, from community groups to policy-making bodies.

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# Data and methods

- Primary farm and household surveys conducted between December 2022 and February 2023
  - India- Bihar and Jharkhand
  - Nepal- Madhesh and Karnali
  - Pakistan- Rahim Yar Khan- Punjab
- Intra-household survey covered individual demographics, socioeconomic status, agricultural practices, crop economics, A-WEAI, and food consumption patterns.
- Women's Empowerment in Energy Score (WEES) is a set of 8 indicators to assess the empowerment of women in energy use and energy decisions on- and off-farm.
- WEES is designed to supplement WEAI and:
  - Assess the level of women's agency in energy decisions for domestic and productive use relative to men.
  - Assess relationship of women's agency in energy decisions with individual and household outcomes.

# WEES Indicators

	Indicator	Adequacy definition
1	Has unrestricted access to mechanized productive assets	Adequate if respondent has unrestricted access to at least one mechanized asset that the household has access to for income generation (tractor, pump, sewing machine, etc.)
2	Has unrestricted access to mechanized consumer durables for domestic use	Adequate if respondent has unrestricted access to at least one mechanized consumer durable the household has access to for domestic use (television, fridge, cookstove, etc.)
3	Decides on acquiring energy source for domestic use	Adequate if solely or jointly decides which energy source to acquire for cooking, heating, and lighting
4	Decides on acquiring energy source for productive use	Adequate if solely or jointly decides which energy source to acquire for all agricultural and other income-generating activities applicable to the household
5	Decides on changing energy source for domestic use	Adequate if solely decides OR can participate to a medium or high/er extent in decisions about changing from unclean to clean energy sources for domestic use (for all sources needed for cooking, heating, and lighting)
6	Decides on changing energy source for productive use	Adequate if solely decides OR can participate to a medium or high/er extent in decisions about changing from unclean to clean energy sources for productive use (sources for use in all agricultural, post-harvest and non-farm business activities applicable to the household)
7	Acquires energy source for domestic use	Adequate if solely or jointly responsible for acquiring energy source for cooking, heating, and lighting
8	Acquires energy source for productive use	Adequate if solely or jointly responsible for acquiring energy source for all agricultural and other income-generating activities applicable to the household

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# WEES, WEAI and Sensitivity analysis

- Correlation between WEES and A-WEAI indicators are weak ( $V < 0.3$ ) across all three countries.
- Weak correlations indicate WEES contributes information about agency beyond empowerment captured by WEAI.
- WEES therefore provides beneficial supplement to A-WEAI in understanding gender differences in energy use decisions on-farm and in the household.

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# Results

- Significant disparities between men and women in decision over energy sources for productive use, but not energy assets
- Wealth and energy empowerment negatively correlated in Pakistan, opposite in Nepal. Wealthier HHs more unequal in India
- FHHs have higher WEES in Nepal
- Women with higher WEES more likely to participate in the labor market
- In Nepal & Pakistan WEES positively correlated with clean energy use, but opposite in India
- Relationship between WEES and time poverty ambiguous
- WEES associated with lower food insecurity in Nepal and higher dietary diversity in Pakistan



# What have we learned from measuring empowerment? From WEAI to WEES and beyond

- Value of mixed methods
  - WEAI drew on life histories and case studies
  - Pro-WEAI has qualitative protocols that informed the choice of indicators and interpretation of results
  - All add on tools start with qualitative data, intensive framework building and stress-testing
- Listening to people's own understandings and experiences of empowerment is important
- Context is important—on its own and to interpret quantitative findings

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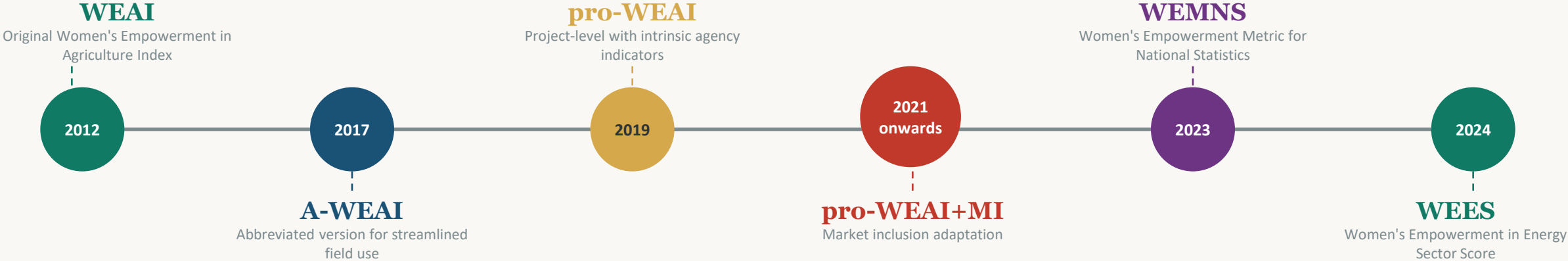
# Thank you

For more information visit:  
**[weai.ifpri.info](http://weai.ifpri.info)**

*Contact: [m.alvi@cgiar.org](mailto:m.alvi@cgiar.org)*

# The WEAI Family: A Timeline

*A modular, domain-adaptable framework with a common core*



# Driving Change: WEAI's Impact and Innovations

## Reach

As of September 2025:

- Adopted by **285 organizations** in **70 countries**
- Over **990 people trained** through numerous trainings and capacity strengthening sessions since launch
- **1,630 people have enrolled** in the pro-WEAI distance learning courses since the course launch in 2021

## Impact

- IFAD integrated pro-WEAI into its standard household surveys and gender transformative projects as core outcome indicators
- The Gates Foundation embedded pro-WEAI indicators into the M&E systems of its gender-transformative investments, including support to Ethiopia's Ministry of Agriculture to implement a national gender equality strategy and track impact
- WEAI findings from the Bangladesh Integrated Household Survey informed the ANGeL pilot, leading to Ministry of Agriculture approval for a national scale-up plan in 2020

## What We're Working on Now

- **Develop, validate, and refine new tools** to respond to global demand on emerging topics
  - **NEW** Pro-WEAI Climate Change add-on module (*in collaboration with the Gender, Climate Change And Nutrition Integration Initiative*)
  - WEMNS scaling-up (*in collaboration with FAO and the 50x2030 Initiative; CG Scaling Challenge winner*)
- **Continue developing guidance resources** and providing complementary **technical support services** to all WEAI users
  - **NEW** WEAIbot (*AI chatbot in collaboration with the Digital Accelerator*)
  - [WEAI Resource Center and Helpdesk](#)
- **Facilitate harmonization and avoid duplication of efforts** by encouraging CGIAR researchers and partners to apply international validated tools and contribute to cumulative learning