



ENERGY TECHNOLOGIES AREA

Evaluation of Energy Efficiency Programs and Policies in Asia: Challenges, Opportunities and Next Steps

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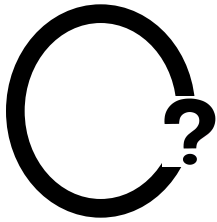
Topics

1. What is Evaluation?
2. Evaluation Capacity Building
3. Developing an Evaluation Community in Asia
4. Evaluating Gender and Energy Efficiency
5. Evaluating Sustainable Development Goals

1. What is Evaluation?

- Evaluation is an **objective** process of understanding **how** a policy or program was implemented, **what** effects it had, for **whom** and **why**
- Leads to **more effective** policies and programs

Why Do We Evaluate?



Reduce uncertainty

Provide information needed to make good decisions regarding investments in programs



Assess impacts

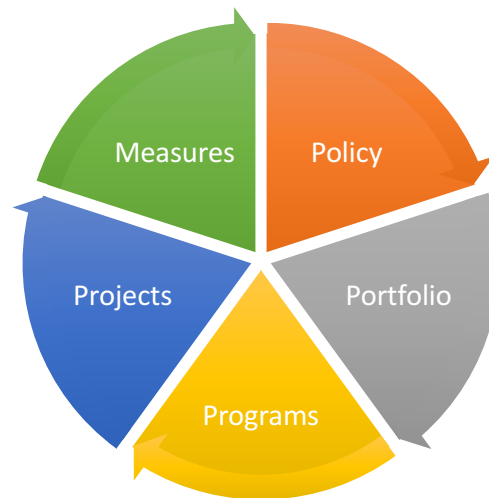
Estimate the change in energy usage and other targets due to programs



Improve program design

Prioritize program and portfolio budgets and inform resource planning

Focus of Evaluation



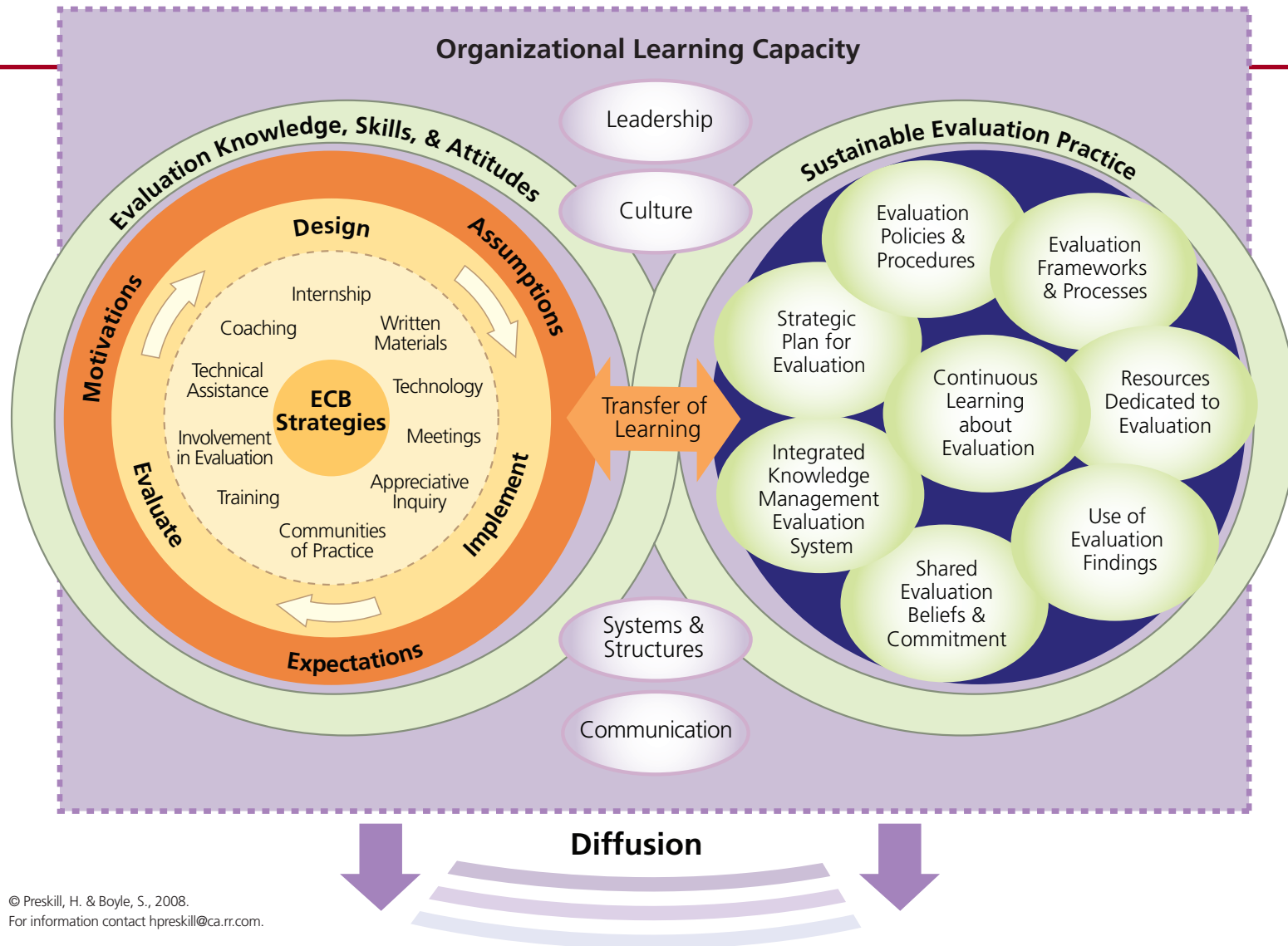
2. Evaluation Capacity Building (ECB)

1. What is ECB?
2. Multidisciplinary model of ECB
3. Use of ECB model
4. Capacity building questions
5. Evaluation capacity indicators
6. Evaluation practice indicators

What is Evaluation Capacity Building (ECB)?

- ECB involves the design and implementation of teaching and learning strategies to help individuals, groups and organizations learn about what constitutes effective, useful and professional evaluation practice.
- The ultimate goal of ECB is **sustainable** evaluation practice – where members continually ask questions that matter, collect, analyze, and interpret data; and use evaluation findings for decision-making and action.

A Multidisciplinary Model of Evaluation Capacity Building



Use of ECB Model

- **To explore:**

- Which evaluation capacity building strategies are most effective for achieving various individual and group level outcomes?
- Which strategies are most effective for certain kinds of participants?
- How can different ECB strategies be designed to maximize their impact?

- **In the hopes of:**

- Expanding ideas for implementing ECB activities and processes
- Emphasizing participant learning

Capacity Building Questions

1. Whose capacities need to be developed at the national and local levels?
2. What types of capacities are needed?
3. What are the baseline skills in evaluation with a focus on energy efficiency policies and programs?
4. How will stakeholders use evaluation?
5. What types of data are routinely collected at the local and national levels currently?
6. Are policymakers using evaluation results to make decisions?

Evaluation Capacity Indicators

- Access to information about evaluation
- Collective learning opportunities
- Evaluation framework
- Repository of evaluations
- Opportunities for training in evaluation
- Policies/procedures supportive of evaluation

Evaluation Capacity Indicators #2

- Resources for supporting evaluation
- Supervisor(s) engages in and uses evaluation
- Supervisor(s) supportive of evaluation
- Staffs' collective attitudes toward evaluation
- Staffs' collective knowledge and skills

Evaluation Practice Indicators

- Conduct of evaluation (performance)
- Sharing of evaluation
- Learning evaluation
- Use of evaluation
- Motivation for performing evaluation
- Extent of responsibility for evaluation
- Frequency of evaluation
- Embeddedness of evaluation

3. Developing an Evaluation Community in Asia

1. Challenges
2. Opportunities
3. Vision
4. Past activities
5. Next steps

Challenges

- Evaluation experience is limited in most economies in Asia
 - Government initiatives do not include evaluation
 - Action plans or policy often focus only on implementation of policies and programs
 - Funding of data collection and evaluation of programs and policies is often not available or of low priority
 - Expertise (trained evaluators) is limited
 - Evaluation data are lacking or not standardized

Opportunities

- Countries are in the process of developing and implementing new policies on energy efficiency. There are opportunities to:
 - Introduce evaluation as part of the process
 - Increase expertise in governments for data gathering and evaluation
 - Increase the body of knowledge on the effects of energy efficiency policy and programs
 - Improve energy efficiency policy and program design and implementation

Vision

- Support the strengthening of evaluation leadership and capacity, especially in developing countries
- Foster the cross-fertilization of evaluation theory and practice in Asia
- Address international challenges in evaluation

Activities

- October 2015: International Workshop for Asia Energy Efficiency Program and Policy Evaluation (Beijing)
- April 2016: APERC Evaluation Workshop (Taichung City, Chinese Taipei)
- March 2017: APERC Evaluation Workshop (Jeju, Republic of Korea)
- June 2017: ACEF Evaluation Workshop (Manila, Philippines)
- October 2017: APEC Evaluation Workshop (Bangkok)
- November 2017: IEPPEC Asia-Pacific (Bangkok)

APEC Evaluation White Paper

- In 2017, link to evaluation survey was sent to experts in APEC member economies, as well as Expert Group on Energy Efficiency and Conservation and Energy Working Group members – multiple responses per economy were accepted
- 16 Surveys were completed from 13 (of 21) economies (and 8 of 11 developing economies)

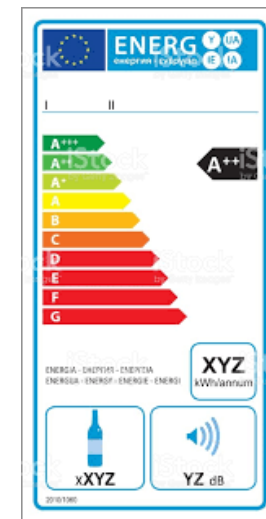
Survey Topics

- Evaluation of energy efficiency policies and programs for:
 - Industrial buildings, lighting and appliances, building codes and transport
- Organizations involved in evaluation
- Suggestions for promoting evaluation and improving capability of evaluators
- Role of women in evaluation (involvement, barriers, strategies, and impacts)

Key Survey Findings: Main Areas of Evaluation Activity

Policies and programs related to:

- energy efficient lighting
- electrical appliances
- energy efficiency in industry



Evaluation Status

Economy	Evaluation required	Evaluate policies relating to			
		Industry	Appliances	Building codes	Transport
Australia	No	Yes	Yes	Yes	
Canada	Yes	Yes	Yes	Yes	Not sure
Chile	Yes	Yes	Yes		
China	Yes	Yes	Yes	Yes	Not sure
Indonesia	Yes	Yes	Yes	No	No
Malaysia	No	Yes	Yes		
Mexico	No	Yes	Yes	No	Yes
New Zealand	No	Yes	Yes	Yes	Yes
Philippines	No	Yes	No		No
South Korea	Yes	Yes	Yes	Yes	Yes
Thailand	Yes		Yes	Yes	
United States	Yes	Yes	Yes	Yes	
Vietnam	No	No	Yes	No	No

Next Steps

- **New website** for Asia evaluation organization (underway)
 - Evaluation resources (e.g., people & documents)
 - Webinars
- **Evaluation ambassadors** (later this year):
 - Suggesting and helping to organize events and webinars that would help to develop evaluation capacity in their country.
 - Helping to reach out to evaluators who would benefit from joining the community
 - Raising awareness of the new Asia evaluation website and the knowledge base available through the website
 - Participate on the Planning Committee for the Second Asia Evaluation Conference
 - In-country and International Ambassadors
- **Second Asia Evaluation Conference** (2019)

4. Evaluating Gender in Energy Efficiency Programs and Policies in Asia

- The field of gender and energy is still emerging
- Most focus has been on renewable energy
- Very little attention paid to energy efficiency
- But many organizations are becoming more interested in the topic, such as:
 - OECD, World Bank, ADB, IUCN Global Gender Office, UNEP, UN Women, UNFCCC, USAID, APEC, Global Gender and Climate Alliance, Women's Environment and Development Organization, ENERGIA

Topics

1. Gender Perspectives
2. Gender and Energy Efficiency
3. Recommendations for Evaluators
4. Conclusions

1. Gender Perspectives

1. Gender and social equity perspective (distributional impacts)
2. Gender and social inclusion perspective (accounting for intersection of gender with other social variables (race, ethnicity, caste))
3. Gender: Women and men (but can mean more)
4. North (Developed) / South (Developing) perspectives



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Inequity Perspective

- It is a rare program or policy that benefits all people uniformly
 - There are winners and losers in most interventions
- Two key evaluation and program planning questions relating to equity:
 - How can interventions be planned to address inequities?
 - Are those who are intended to benefit from the intervention the ones who actually benefit?

Equity-focused Evaluation #1

- Focuses on **who** engages with the program
- Moves beyond a focus on outputs (how many households were served) towards a better understanding of **who** was served and where the program recipients belonged in the continuum of need
- The focus on inequities is different than the focus on effectiveness
 - Move from *average* impact/improvements to *distribution* of impacts/improvements

Equity-focused Evaluation #2

- Questions need to be raised about building **evaluation capacities** of programs, organizations and systems
- What **types of evidence** can an evaluation generate that can help with concrete actions toward inequities?
- The role of evaluations in addressing equity has not been the basis of a **systematic inquiry**
 - What system-level **contexts** are necessary to reduce inequities?
 - What **mechanisms** are in play in reducing inequities?
 - What kinds of evaluation **capacities** are needed for systems and individuals to evaluate inequities?

2. Gender and Energy Efficiency (EE)

- Interlinkages between gender and EE have not received as much attention as other elements of the energy sector in the past
- Currently, tendency for gender to remain invisible, unacknowledged or marginalized
 - Energy policies are regarded as gender neutral
 - May inadvertently be discriminatory to women and their needs

Gender and EE #2

- EE is not gender-neutral
 - Women and men are able to contribute and benefit in different manners from these interventions
- Key sectors:
 - Household energy management
 - Food processing
 - Agriculture

Household Energy Management

- Women bear the brunt of relying on inefficient energy sources and technologies
 - Use of biomass, charcoal or agricultural waste for cooking and heating
 - Use of kerosene for lighting
 - Health, safety & empowerment (land ownership) issues



Household Energy Management #2

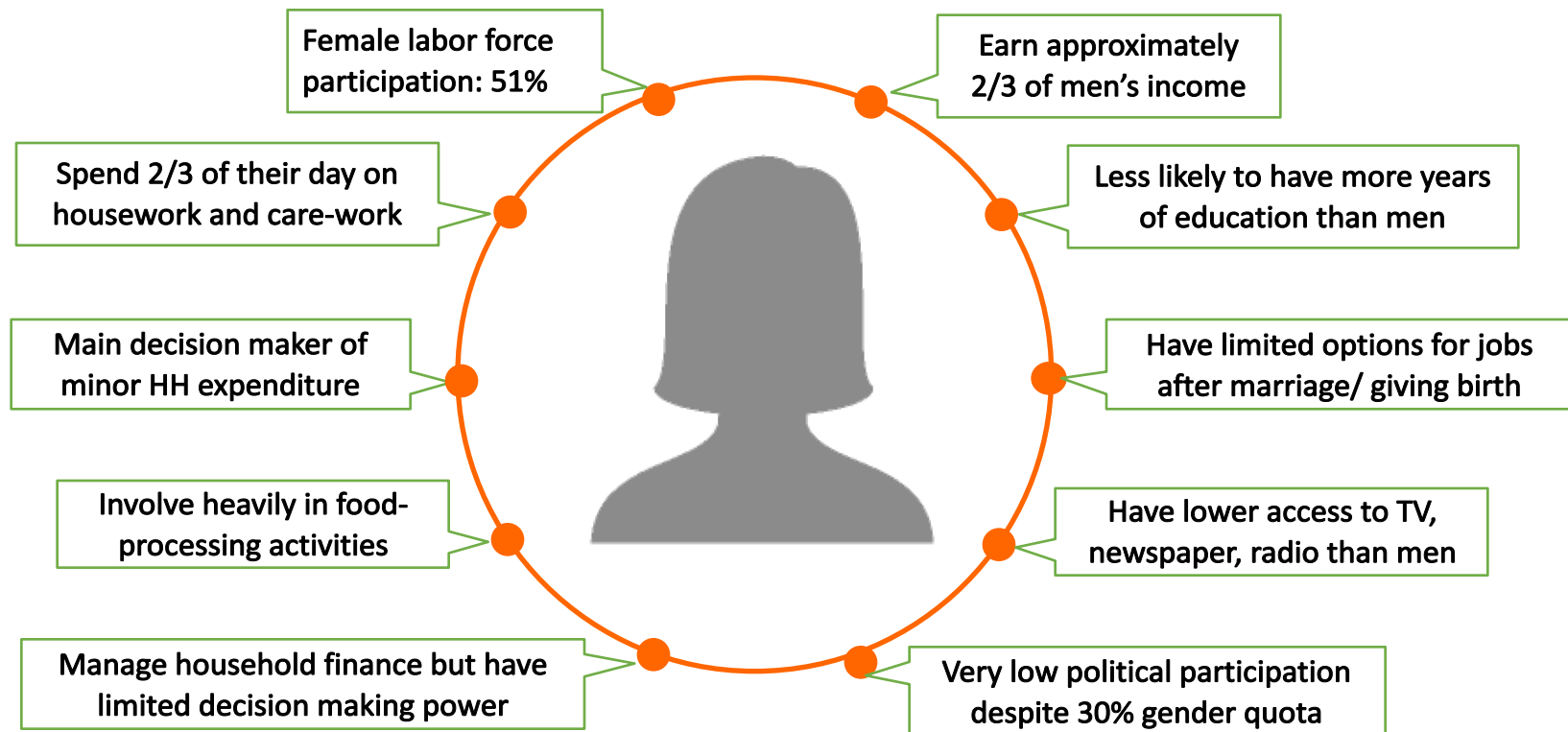
- Women play a key role in household energy use by making and influencing decisions about:
 - Use of appliances, including the choice of time of use (affecting peak use)
 - Purchases of goods and services (efficiency)
 - Education and shape of children's future energy consumption habits
 - Indoor thermal comfort (thermostat settings, indoor air)
- Women are more willing than men to make changes in how and what they consume (future targeting??)



GENDER CONTEXT IN INDONESIA

Source: Kusumawardhani 2017

- Largely patriarchal society undergo development which have facilitated changes in societal attitudes to gender roles
- Strong government commitments → laws and policies on gender equality and women empowerment: ratification of international conventions/protocols, gender aspects in development plans, institutional setting; but challenges remain



Kyrgyzstan #1

- UNDP/GEF project: “Improving Energy Efficiency in Buildings”
 - Conducted research on public awareness and attitudes towards EE in buildings
- **Selected findings:**
 - Children, elderly and women spent more time than others in poorly insulated and heated buildings constructed during the 1960s-1980s
 - 60% of women respondents never heard of EE buildings and renewable energy
 - Low level understanding of relationships between EE, savings in public budgets & household budgets, impact on health and education, and women’s employment
 - Women’s participation in EE-related decision-making was limited
 - Rural women’s vulnerability was aggravated by inefficient energy use and availability



Kyrgyzstan #2

- To address the identified gaps, minimize gender inequality and empower women, and to maximize the EE potential and socioeconomic benefits of EE initiatives, the project worked on:
 - Capacity development for women to be specialist technicians, construction workers and operators
 - Use of women's groups as knowledge transfer outreach
 - Development of a mandatory construction code on thermal insulation
 - Construction of new public buildings based on new code
 - Provision of EE refrigerators for medicine storage

Kyrgyzstan #3

- Selected impacts:
 - 40% of 156 specialists trained on EE technologies in design, construction and operation were women
 - 2 buildings constructed: 970 boys and girls and 30 teachers studied in warm, comfortable classrooms for the first time (comfortable gym for 120 children)

3. Recommendations for Evaluators

- Ensure that the **Terms of Reference** for the project evaluation team requires gender analysis
 - Team should have gender expertise, be gender balanced and engage with relevant project and other partners working on gender
- **Partner** with organizations with gender expertise for reviewing the evaluation process or reports
- **Monitor and evaluate:**
 - Changes in women's empowerment, work productivity, income, health, education, food security
 - Barriers to participation in project activities
 - Unexpected impacts on women

Recommendations for Evaluators #2

- Develop **evaluation frameworks** that examine *participation* in policy and program design and implementation by gender and that examine *impacts* of such programs and *adoption* of technologies by gender
- Close-up, qualitative **methods** are essential
 - Participant observation
 - Qualitative interviews
 - Life histories
 - Diaries

4. Conclusions

- Gendered aspects of energy and energy efficiency are understudied
 - Need for more rigorous empirical research – especially if we are to achieve ambitious energy savings and emissions reduction goals (adoption and use of EE technologies)
 - Need for gender balance in research teams
- Evaluators will need to evaluate the possible uneven distribution of burdens as a result of energy saving in households
 - Gender balance need in evaluation teams
- ***Bottom Line:*** If gender impacts are not evaluated, they are unlikely to be given any attention

Stay Tuned!

- Webinar on gender and energy efficiency in April 2019
 - The webinar series is developed under the energy component of Advancing Gender in the Environment (AGENT) Initiative (formerly known as Gender Equality for Climate Change Opportunities -GECCO)
 - AGENT is a USAID initiative, implemented by the Global Gender Office (GGO) of the International Union for Conservation of Nature (IUCN)

5. Evaluating Sustainable Development Goals (SDGs)

1. What are the SDGs?
2. SDG Evaluation
3. Challenges for SDG Evaluations
4. Unique Opportunities for SDG Evaluation
5. Concluding Remarks

1. What are the SDGs?

Approved by the UN General Assembly in 2015 and underpin the 2030 Agenda for Sustainable Development that officially came into force in Jan. 2016



What are the SDGs? #2

1. Based on 5 universal and interlinked principles
 - a. People, planet, prosperity, peace and partnership
 - b. They define a path to end poverty, ensure prosperity and protect the planet and its inhabitants
2. **SDG7** – “Ensure access to affordable, reliable, sustainable and modern energy for all”
3. As a key constituent of SDG7, **energy efficiency** contributes directly or indirectly to achieving all the other SDGs, many of which are interconnected across the three dimensions of environmental sustainability, human development and sustainable growth

2. The Importance of the SDG Evaluations

1. SDGs are the major international development commitment for at least the next 15 years
2. Essential to know if it works and the money is well spent
3. Evaluation process is country driven and participatory
 - a. SDGs are “owned” by the countries and not by the UN and donor agencies
 - b. National governments are the key agencies responsible for the implementation of the evaluations of SDS in each country
4. Focus is on how could development assistance be improved:
 - a. During 2017-2030
 - b. After 2030

3. Challenges for SDG Evaluations

1. The program is huge and complex with multiple actors, objectives and programs at all levels
2. Currently, the SDG evaluation design focuses on monitoring and much less on evaluation
3. Many people do not believe it is possible to evaluate the SDGs
4. Most agencies focus on a particular sector
 - a. Intersectorality is very difficult to evaluate and for most agencies a low priority
 - b. Different kinds of organizations need to work together on an integrated evaluation

Challenges for SDG Evaluations #2

1. Most agencies focus on results-based approaches with little attention to sustainability
2. Difficult topics to evaluate:
 - a. Gender analysis
 - b. Vulnerability
 - c. Exclusion

4. Unique Opportunities for SDG Evaluation

1. The SDGs focus the world on broad questions about the effectiveness of development aid
 - a. What works? For whom?
 - b. Where? Why? How?
2. Brings together many different kinds of organizations and talents
3. Gives voice to vulnerable groups and grassroots organizations
4. Unique access to world-wide platforms for the dissemination and utilization of evaluation findings

5. Concluding Remarks

SDGs open up a completely new world of evaluation and challenges

- Asking new questions, much broader, much longer term
- Introducing a whole range of evaluation issues of complexity, emergence, identifying on who is being left out, looking at inter-sectoral linkages.
- Thinking beyond silos; instead connecting and interrelating interventions, breaking down silos, examining integration, alignment, and coherence across sectoral specializations and across SDGs.
- Connecting the local with the global, and the global with the local.

Supporting Information

- IEPPEC Asia Pacific Conference, November 2017 in Thailand – papers & presentations
 - <http://www.ieppecc.org/thailand/>
- Report on IEPPEC-led APERC evaluation workshop, March 2017 in South Korea
 - http://aperc.ieej.or.jp/publications/reports/pree/EEP_Workshop_Evaluation_Report.pdf
- Report on IEPPEC-led APEC evaluation workshop, October 2017 in Thailand
 - Report contains the presentations at the workshop, but also includes an “Evaluation White Paper” describing the current evaluation landscape within APEC, based on a survey of APEC energy policy makers
 - <https://www.apec.org/Publications/2018/01/Promoting-the-Development-of-an-Evaluation-Community>

Thanks

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Time for Questions

