HIGHLIGHTS FROM IMPACT ASSESSEMENTS - IWMI & WLE

CGIAR Independent Science and Partnership Council

Impact Assessment Focal Point Meeting

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Photo: Tom van Cakenberghe/IWMI

IWMI International Water Management Institute 2012 STOCKHOLM WATER PRIZE LAUREATE

Water for a food-secure world

www.iwmi.org

IMPACT ASSESSMENT PORTFOLIO AND CHALLENGES

PORTFOLIO

- Projects
- Policies
- Technologies
- Interventions
- Institutions

CHALLENGES

- Attribution
- Time lag
- Sustainability

IA of natural resources management projects or policies

Managing the Water-Energy Nexus: The Jyotigram Yojana in Gujarat

Initial research

Existing energy policies led to **groundwater depletion** and an **unviable power industry**.

Recommendations

IWMI proposed a strategy controlling electricity subsidies and groundwater draft simultaneously through **rationing power supply** to tubewells by **separating power lines** supplying tubewells from those supplying non-farm users.

Policy change

Jyotirgram Scheme instituted in Gujarat - September 2003

Incorporation of most of IWMI's recommendations.

Impact assessment

Recent IWMI **impact assessment** showed:

- [a] drastic improvement in the quality of rural life;
- [b] upsurge in non-farm economic activity;
- [c] halving of electricity – and groundwater use – in agriculture;
- [d] turn-around of State Electricity Board.

Dissemination

Feeder segregation scheme extended to other states in India.

IA of natural resources management projects or policies

Water-Energy-Food nexus in West Bengal: from research results to policy changes and to impact evaluations of these changes

Research background

Research on water markets and water-energy nexus since 2004

IE of tubewell metering (3IE funded), 2010-2011

Results

- Lack of electrification and high diesel prices major bottlenecks for agricultural growth;
- Entry barriers: high cost of pump electrification and permit requirements.

Policy changes

Amendment of the Groundwater Act (2011)

Farmers no longer need permits for electric connection

One Time Assistance for Electrification of Agricultural Pump-sets (2012)

Farmers no longer pay the full cost

Impact evaluations

Micro level impacts
on productivity, cropping patterns and incomes
Methods: RDD, PSM, DiD

Macro level impacts
on agricultural growth
Methods: Panel, DiD

Environmental impacts
and sustainability
Methods: Panel, DiD from GIS datasets

IA of natural resources management projects or policies

Community Water Management in Central Asia: from action research to impact evaluations

Integrated water resources management (IWRM) in Ferghana valley | 2001-2011

Action research project

IWRM principles in the Ferghana Valley

- Reorganization of water governance
- Water Users' Associations (WUAs)

Impact assessment

Constraints: IE not conceived from the beginning of the project, no baseline

Design: IE on the basins, farms and households

Methods: PSM, regression adjustment method, qualitative methods

Impact of Water Users Associations on Water and Land Productivity, Equity and Food Security in Tajikistan | 2014-2018

WUAs created by USAID funded Family Farming Program (FFP) - Khatlon province, Tajikistan

Multi-scale design

- IE of WUAs on farms: DiD, PSM
- IE of WUAs on sub-bassins: DiD with GIS/RS and secondary data
- Additional assessment: case studies, qualitative follow-up

IA of improved technologies, interventions, institutions

Capacity building on drip irrigation

Palanisami et al. 2014. Enhancing the crop yield through capacity building programs: application of double difference method for evaluation of drip capacity building program in Tamil Nadu State, India. *Agricultural Sciences*, 5(1):33-42.

Malik et al. 2014. Negative Impact of subsidies on the adoption of drip irrigation in India, IWREC Conference.

Water storage structures

Hagos et al. 2013. Economics of Selected Water Control Technologies and their Successful Use: The Case of Ethiopia. Ethiop. J. Agric. Sci., 23(1/2): 44-62.

Rainwater harvesting

Gebregziabher et al. 2013. Determinants of Adoption of Rainwater Management Technologies among Farm Households in the Nile River Basin. IWMI Research Report, 154.

Watershed Development

Palanisami et al. 2009. Impacts of Watershed Development Programmes: Experiences and Evidences from Tamil Nadu. Agricultural Economics Research Review, 22: 387-396.

Nedumaran et al. 2013. Bioeconomic modeling of farm household decisions for ex-ante impact assessment of integrated watershed development programs in semi-arid India. Environment, Development and Sustainability.

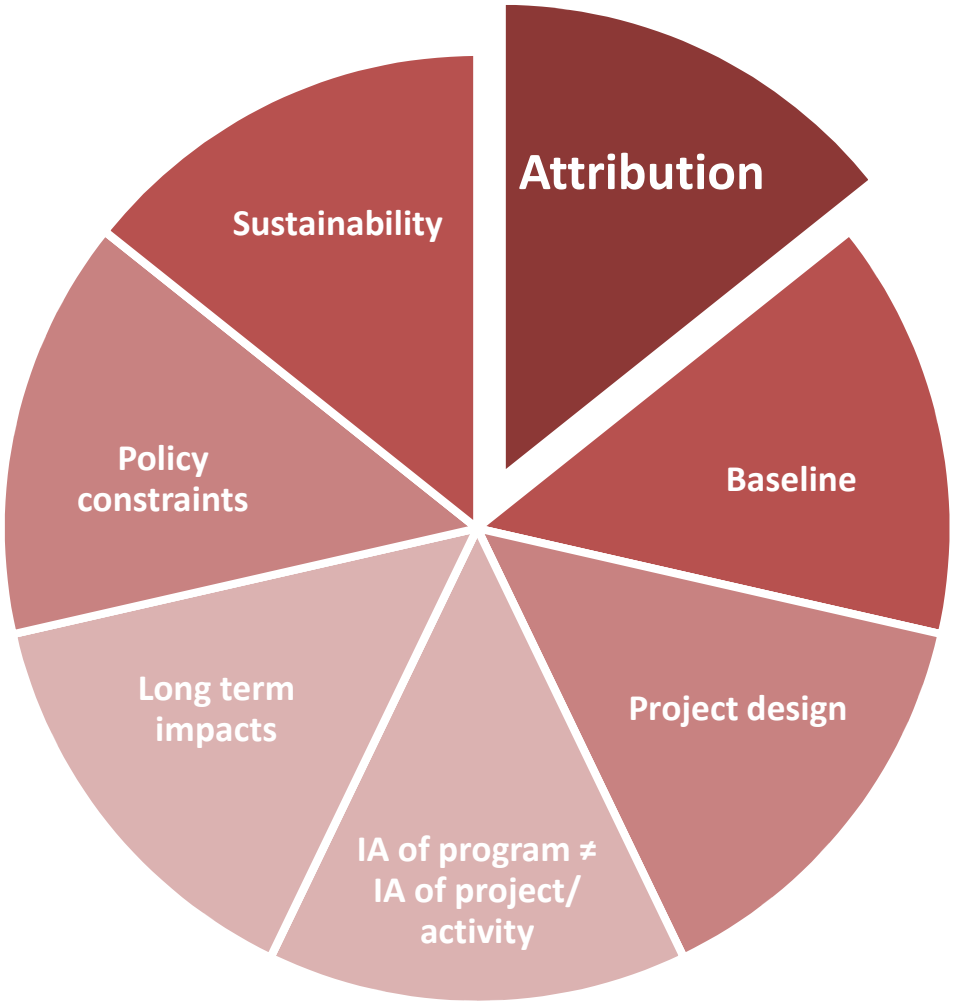
Irrigation technologies

Malik et al. 2014. Technologies for smallholder irrigation: Appropriate for whom - Promoters or Beneficiaries in Bolay et al. (edited)

Hagos, et al. 2012. Agricultural Water Management and Poverty in Ethiopia. Agricultural Economics, 43:1-13.

Palanisamia et al. 2012. Do investments in water management research pay? An analysis of water management research in India. Water Policy 14 (2012) 594–612

CHALLENGES IN IA OF THE RESEARCH CONDUCTED IN IWMI AND WLE



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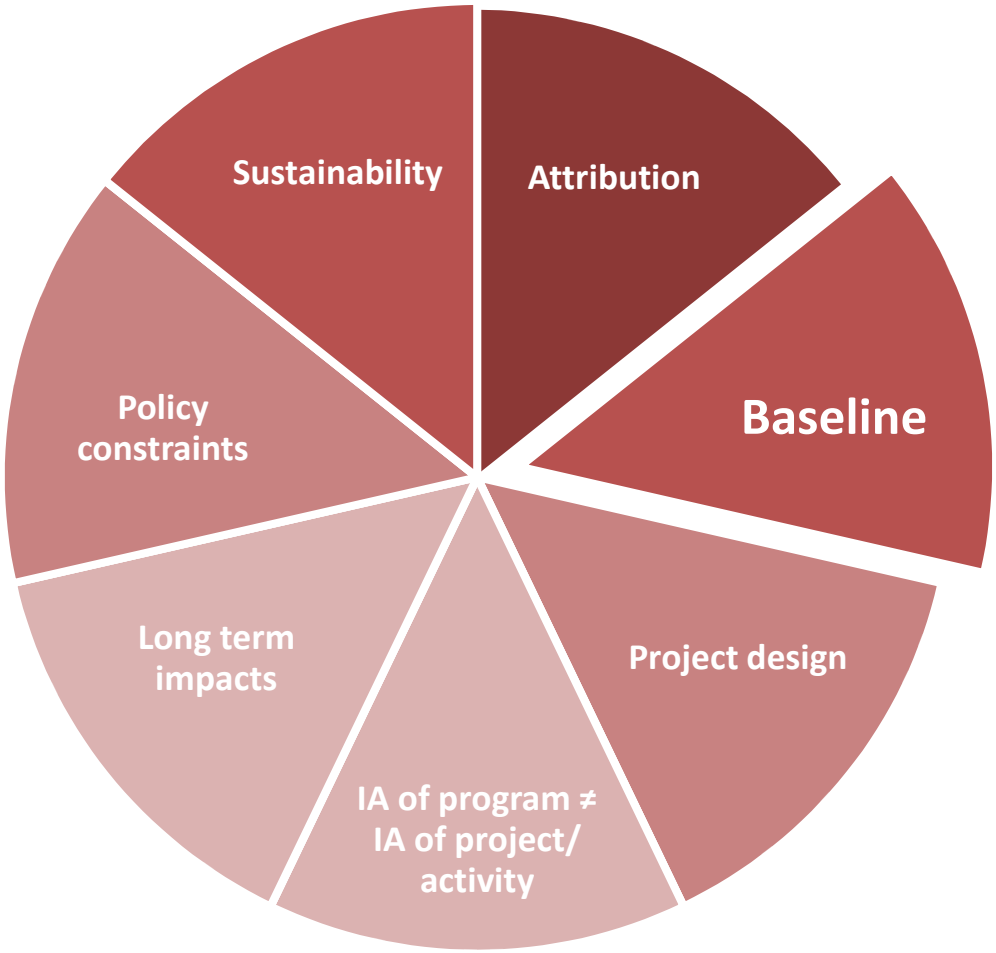

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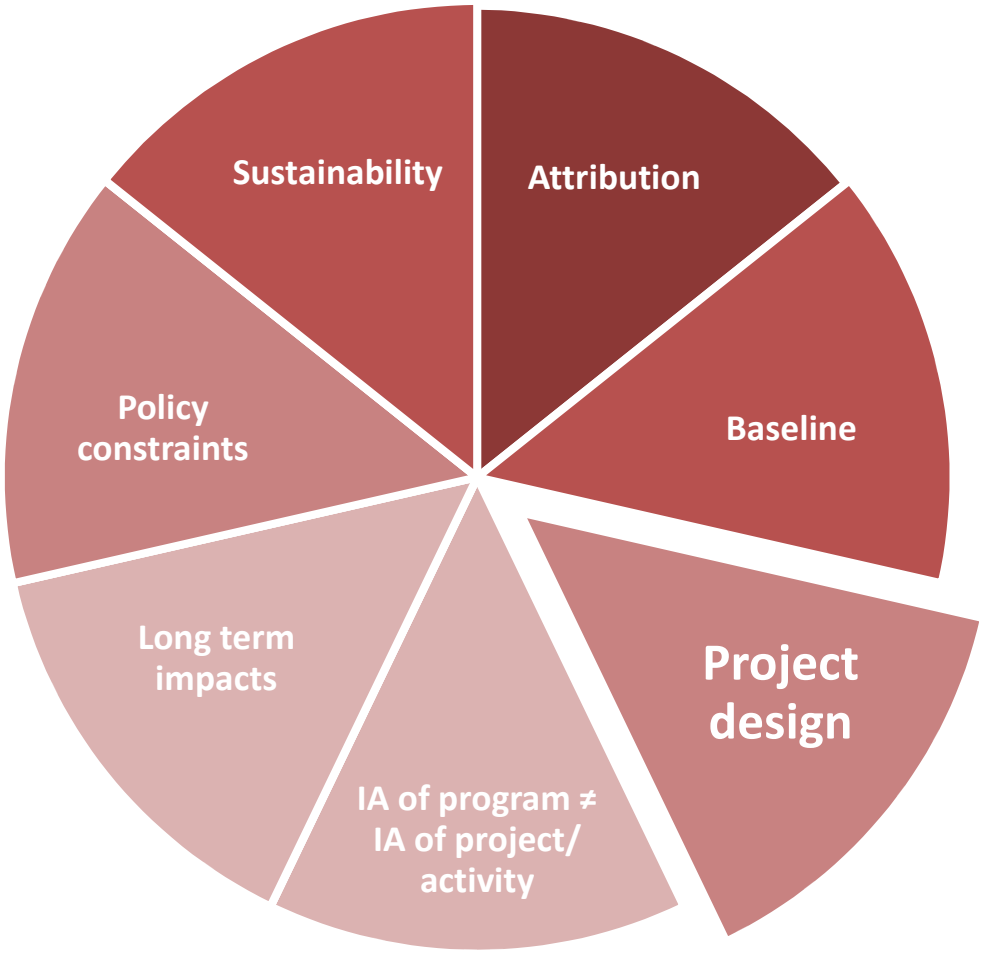

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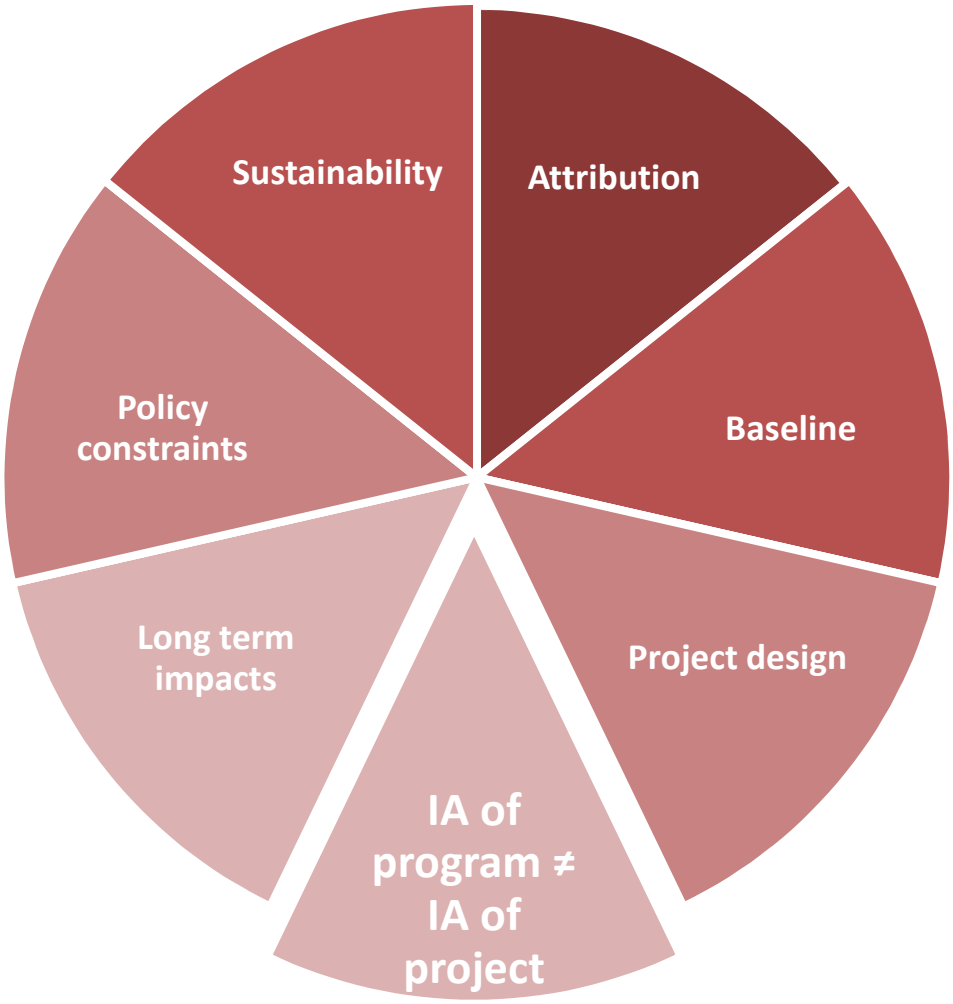

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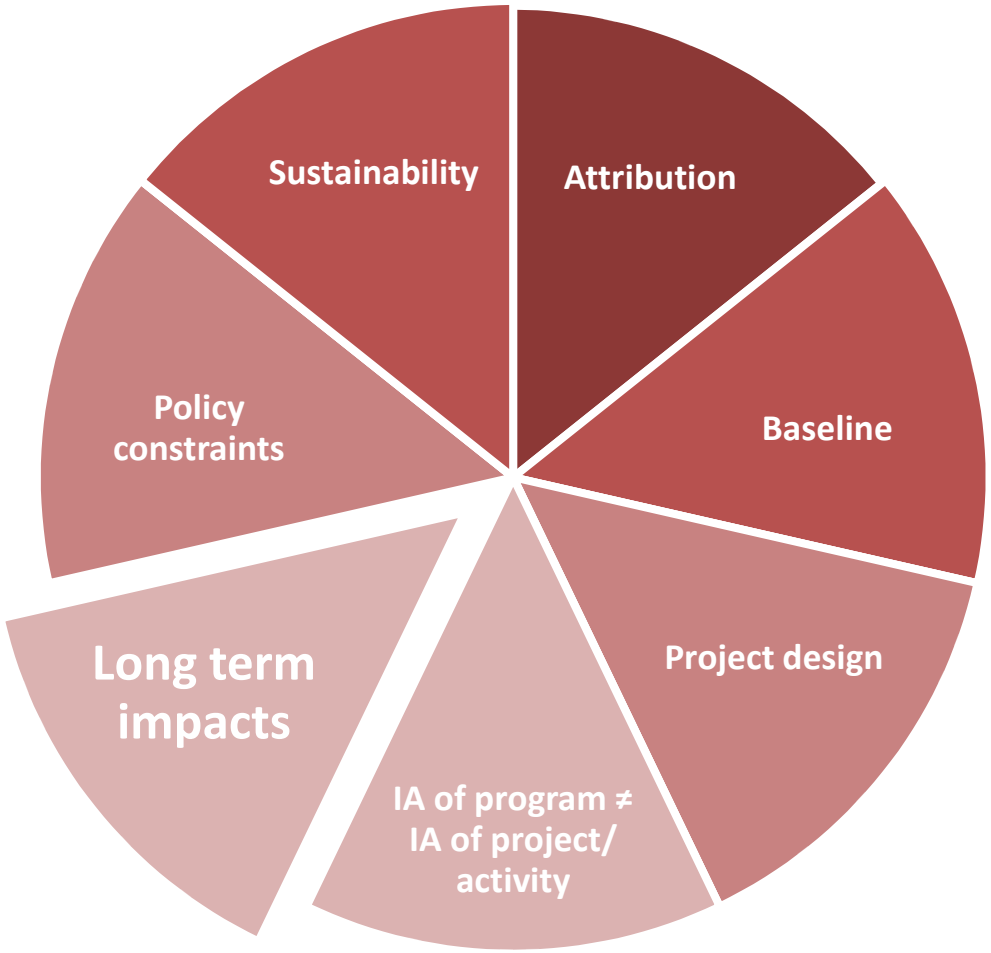

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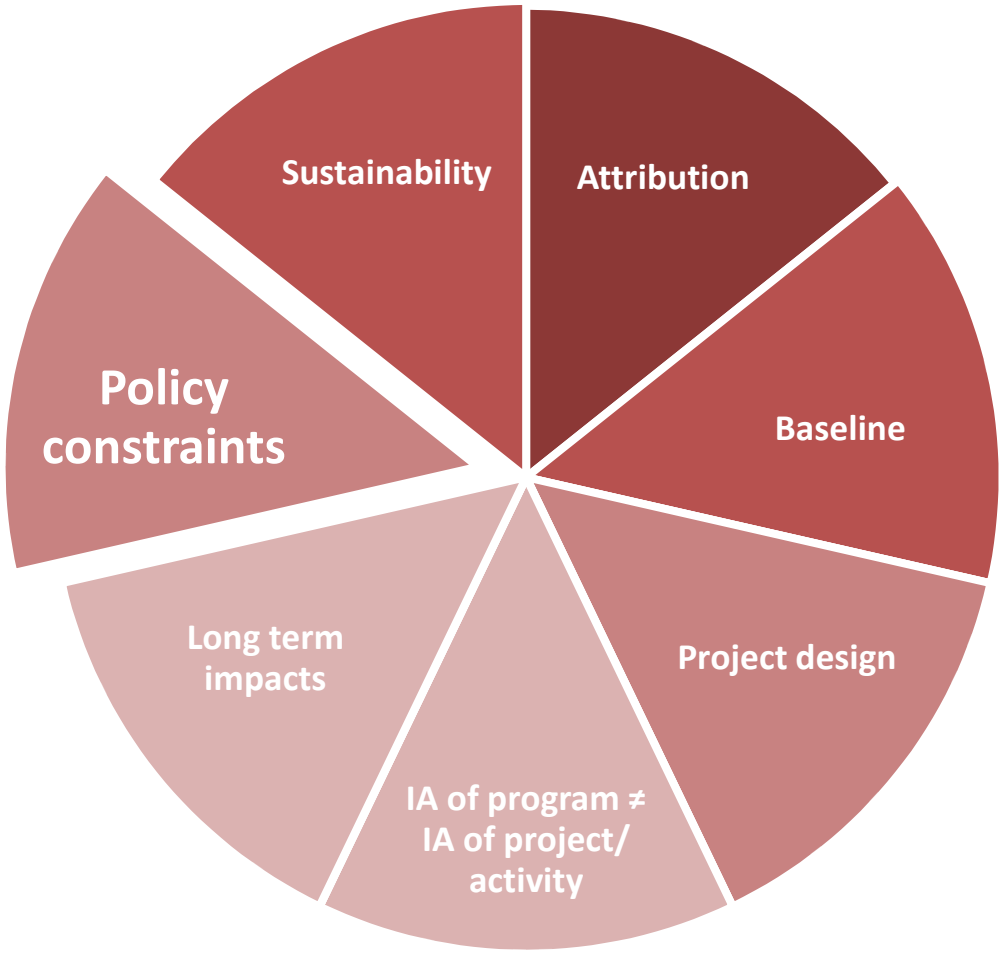

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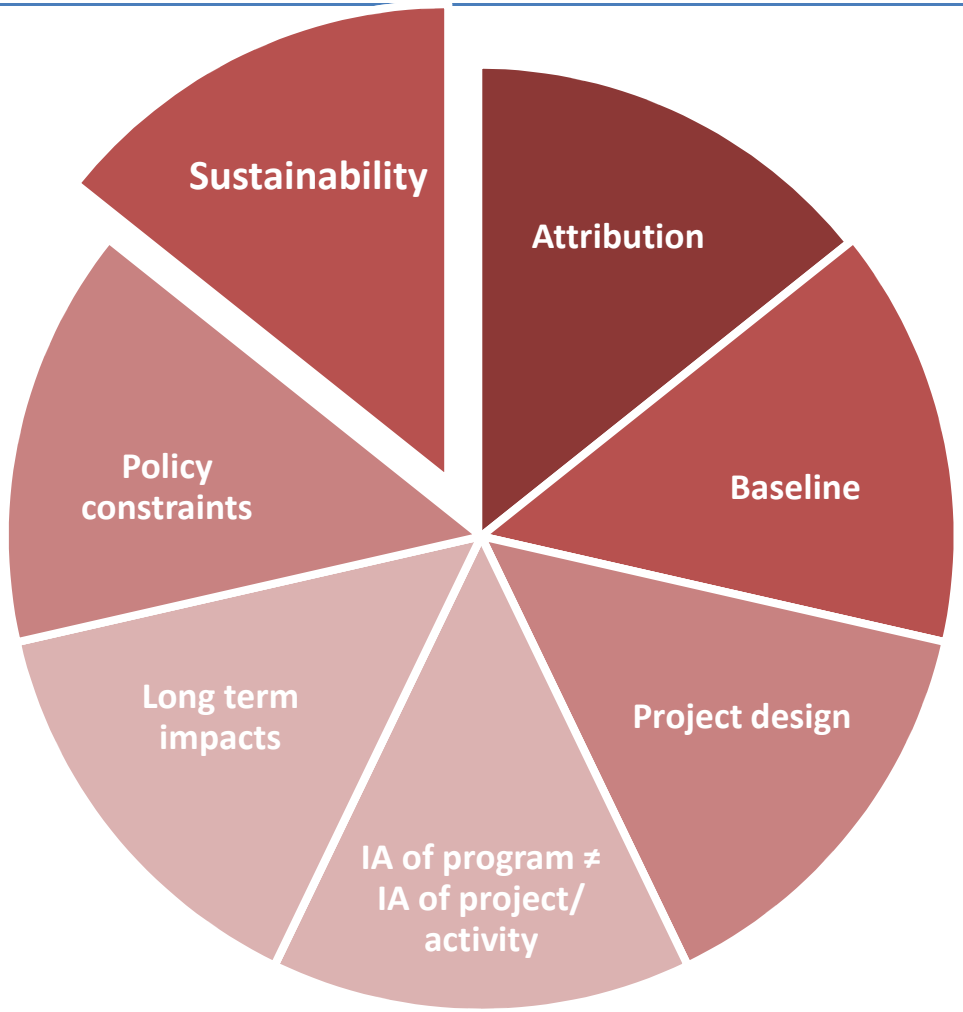

THANK YOU