The Impact of Social Sciences and Humanities on Society

14-16 October 2020, Ottawa

13.45pm – 15.00pm

# SDG's & Grand Challenges

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*Brian Belcher – Royal Roads University*

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# SDGs and Grand Challenges – what role for Science Granting Councils? Some insights from the Science Granting Councils Initiative in sub-Saharan Africa (SGCI)

Ann Weston

Panel on SDGs and Grand Challenges
Conference on "Impact of Social Sciences and Humanities"
Network for Advancing and Evaluating Societal Impact of Science (AESIS)

14 October 2020

Main argument:
National Science Granting Councils (SGCs) have an important role in positioning research in their countries for national, regional and continental impacts

- How do SGCs increase their agency in this process? Through capacity strengthening – studies, tools, frameworks and alliances that challenge the status quo

## Outline

1. Context – the SGCI
2. The role of research excellence or RQ+
3. The role of gender, inclusivity and intersectionality
4. What does this mean for MEL?

# 1. Context - the SGCI

- IDRC sees individual and organizational capacity-building as key part of strengthening national science systems in the Global South to address national development goals and the SDGs. Examples include:

SCIENCE GRANTING COUNCILS INITIATIVE SGCI IOSRS INITIATIVE DES ORGANISMES SUBVENTIONNAIRES DE LA RECHERCHE SCIENTIFIQUE

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**OR Tambo Africa Research Chairs Initiative: Transforming the African Research Landscape**

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- The African Union (AU) Agenda 2063 recognizes ST&I as key enablers for achieving continental development goals
- The STI Strategy for Africa (STISA-2024) emphasises STI's role in Africa's transition to an innovation-led, knowledge-based economy and commits member countries to spending 1% GDP on RDI
- SGCs are now recognised as central to national efforts to fund and catalyze research and innovation to achieve national development goals

- SGCI brings together SGCs or their equivalents in 15 countries across the sub-continent to:
  - strengthen their capacities in managing research (all domains)
  - design and monitor research programs, and to formulate and implement policies based on the use of robust STI indicators
  - support knowledge transfer to the private and public sectors
  - network with each other and other science system actors
- Cross cutting objectives are to promote research excellence and gender equality and inclusivity
- Started in 2015 – currently going to 2023 – with funding from Canada (IDRC), South Africa (NRF), UK (FCDO), Sweden (Sida), Germany (DFG) and from SGCs themselves
- Involves capacity-strengthening through workshops, studies, Master classes, technical support, development of tools, learning by doing notably running research calls with SGCI funding

- Political economy studies under SGCI underscore many challenges faced by SGCs – such as limited national funding, being bypassed by international funders of research, weak infrastructure – and the implications for national and regional science systems and their contribution to national/regional development
- Recent study of 7.5k researchers by Beaudry et al, Next Generation of Scientists in Africa (2018) found :
  - 50% of publications involve collaborative research with peers in Global North, 40% national collaborations, about 8% no collaboration and less than 2% intra-African research collaboration
  - Publications from research that had involved international funding tended to have greater collaboration and higher citations

One immediate outcome of SGCI:

- Councils signed 7 new cooperation agreements :
  - 4 SGCs in East African Community (Kenya, Uganda, Tanzania and Rwanda), 2 trilateral (Malawi-Mozambique-Zambia, Burkina Faso-Senegal-Uganda) and other bilateral
  - 18 projects (5 under agreements) supported; SGCs have continued to engage in joint activities using their own funds.
- Renewed collaboration in new round of joint research calls with SGCI funds in areas of national development priority – aim to leverage additional national and international funds
- Recent example of collaboration under COVID-19 Africa Rapid Grant Fund led by NRF with IDRC, SGCs and several international funders (US$6.7M for 80 projects across 15 SGCI countries, Nigeria, South Africa)

# 2. The Role of Research Excellence or Research Quality Plus (RQ+)

In designing research calls to address national development priorities, and in measuring results of the research they fund, in addition to R&D data, SGCs need to think about the criteria of research excellence

- What is the role of "research excellence" and related metrics in a development context ?
- IDRC evaluation studies have led to the concept of RQ+ or Research quality Plus – which includes scientific rigour but also other qualitative aspects to fit with the context within which the research is taking place
- For IDRC this includes: integrity, legitimacy, importance, and positioning for use

- In the case of SGCI we commissioned some research on what African scholars understood by research excellence (Erika Kraemer-Mbula et al, Transforming Research Excellence. New Ideas from the Global South, African Minds, 2020)

Findings emphasised importance of more nuanced, varied and experimental approaches, that take into account qualitative factors such as:

- the societal value of research
- the interests of researchers to contribute to socio-economic impact
- the value of collaborative and capacity building research, and
- gender and inclusivity

# 3. The role of gender, inclusivity and intersectionality

- Many recent studies underscore challenges women face in science system in sub-Saharan Africa (as elsewhere) – lower % who have studied/worked abroad than men, lower no. of publications, lower collaboration (Beaudry et al, 2018)
- 30% of researchers in sub-Saharan Africa are women; their membership in science academies is generally low – eg 13% (Uganda), 4% (Tanzania) though 24% (South Africa).
- Part of broader challenge of lack of diversity in higher echelons of university/research
- Not just an issue of equality rights but of the value that diversity in a research team brings to the impact of research, e.g. "The nature of knowledge is intrinsically linked to who produces that knowledge" and "Excellence may not be intentionally a masculine construct but its application in the academic system is" (Kraemer-Mbula, 'Gender diversity and the transformation of research excellence' in **Transforming Research Excellence)**

- Not just a binary issue – but interwoven with intersectionality ie other dimensions of race, class, ability, sexuality and location

- Recent study by HSRC (for SGCI) on intersectionality in African scholarship (2010-19) found reference to a wide range of intersecting identities and thematic areas, but lacking in-depth treatment.
- Issues of race, class and gender were considered as in international scholarship on intersectionality vs more specific aspects of prevalence in Africa such as gender and intersections with age, generation, distribution of household wealth (e.g. access to land), language, ethnicity, indigeneity, and rurality. (Ingrid Lynch et al. Intersectionality in African research: Findings from a systematic literature review. Cape Town: HSRC, 2020).

- Some of these issues addressed in the SGCI Gender and Inclusivity Action Plan
- Several SGCs are involved in the Gender Working Group of the Global Research Council, set up after the GRC 'Statement of Principles and Actions on Promoting the Status and Equality of Women in Research' in 2016
- Many SGCs have national STI policies and programs that aim to promote women in science
- Further work is planned with South Africa's HSRC, CODESRIA and Gender at Work to support SGCs to take an inclusive approach to the design of research as well as of research teams they fund – and in raising the profile of these issues in addressing national development challenges

# 4. What does this mean for Monitoring, Evaluation & Learning (MEL)?

- In thinking about the contribution of research towards addressing national priorities and the SDGs
- Important to consider the political economy context within which the research is taking place
- Who is funding the research? Does the research funding reinforce the agency of national science system actors – notably the national SGCs as well as national research bodies and individual researchers – and their capacities to design research calls that address national development challenges and goals?
- The SGCI is working with national SGCs in order to promote their capacities to set research agendas, and design research calls that use nationally relevant evidence and criteria of research quality, that support inclusive research processes, and that can in turn be used to monitor and evaluate the results.

- National SGCs are being supported to use national development priorities and evidence on STI policy to develop research funding strategies
- To develop MEL frameworks and plans to track and measure the performance of their RDI project portfolios
- To collect, analyse and use data on national RDI including the projects they fund
- To contribute to assessing the relevance/ impacts of national STI policies

- As a final note – in addition to working with national SGCs, we recognise the importance of working on other elements of national and regional science systems (such as addressing barriers to women in science, expanding research chairs, promoting networks for science advice, enabling environments for knowledge uptake) for longer term impact

# Thank you!

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# Understanding and Assessing the Contributions of Research to Resolving Grand Challenges

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# Introduction

- Large and complex global challenges
- Coordination of research via SDGs, challenge programs
- Changing expectations of research
- Evolving research approaches to address societal problems (mode 2; post-normal science; utilization-focused research; sustainability science, transdisciplinary research)
- Need for evolution in research evaluation
- Conceptualize & define research effects in systems context
- Portfolio approach for outcome/impact assessment

# Challenge Program Characteristics

- Mission oriented
- Link researchers with a range of academic, industrial & other societal actors
- Outcome focused
- Multi, inter- & transdisciplinary
- Potential to target multiple aspects of a problem or issue simultaneously
- Long duration
- Results-based management

# Example: CGIAR Research Evolution

- More and broader partnerships
- Increased emphasis on results-based management
- Ambitious Targets
- “Co-responsibility for outcomes”
- Theory of change in research planning (program & project scale)
- Re-defining research quality beyond disciplinary bounds
- Multi-faceted research initiatives in complex systems cannot be treated like discrete ‘large n’ interventions.
- Quantitative impact assessment approaches alone are insufficient & inappropriate.

ISPC. (2017). Quality of Research for Development in the CGIAR Context, Brief N. 62. Rome: Independent Science and Partnership Council

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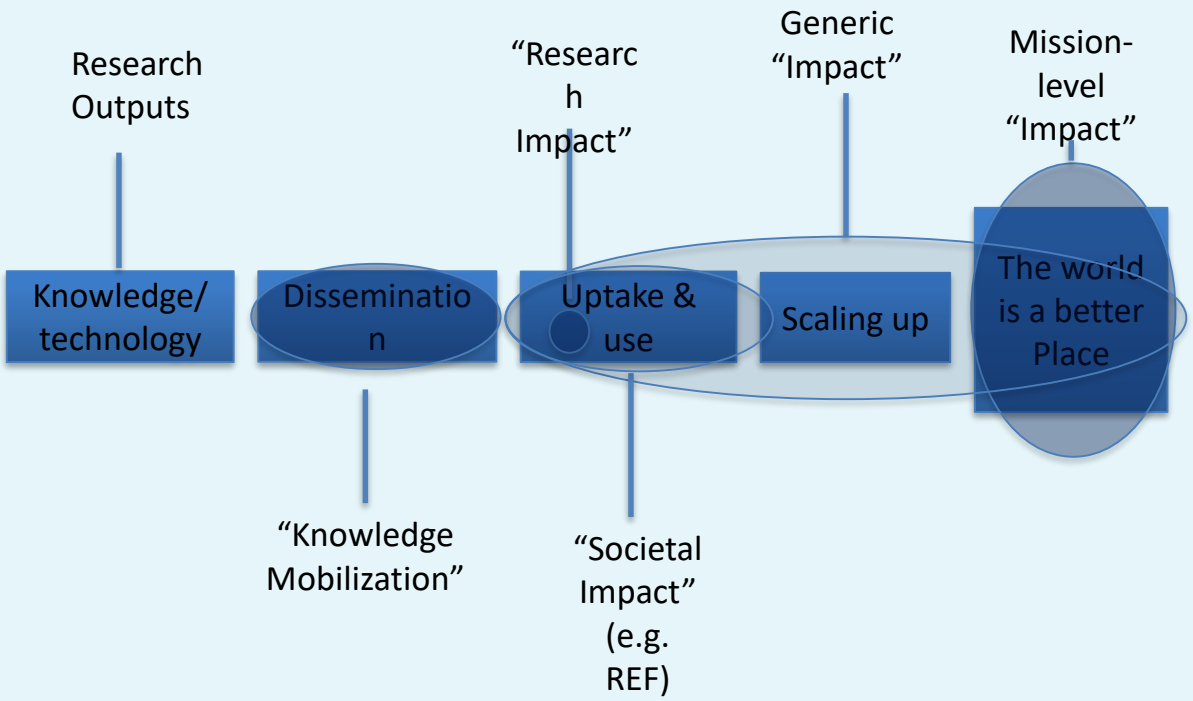

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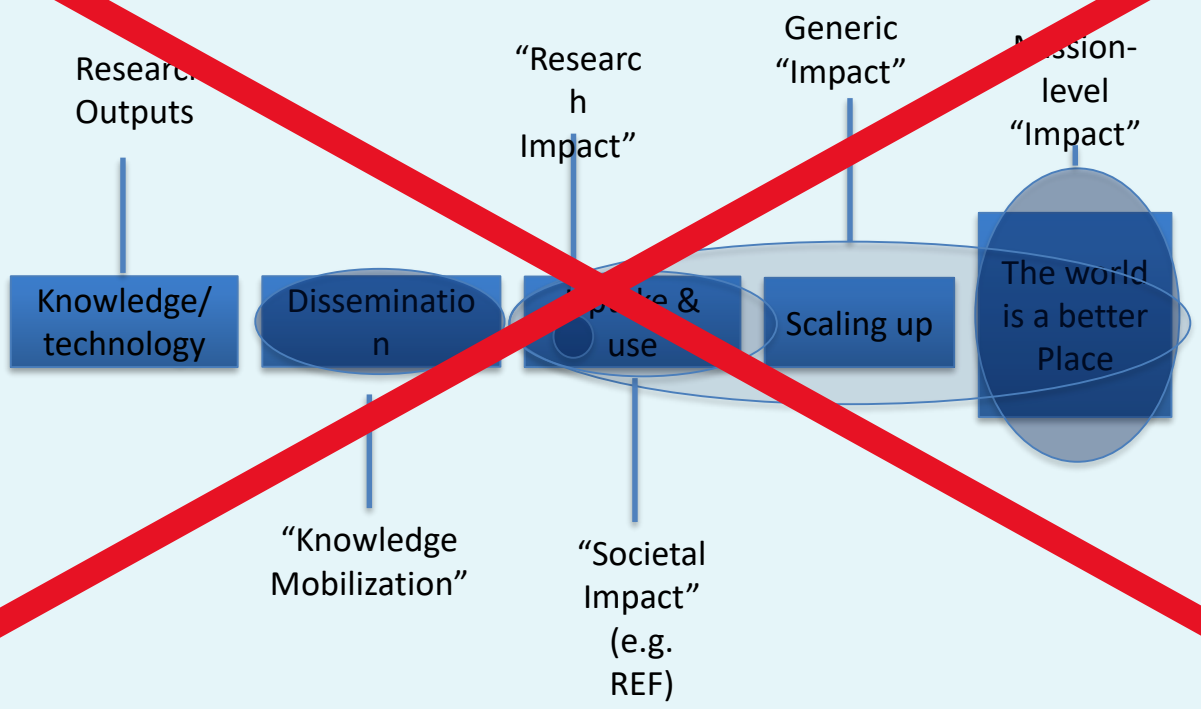


# How Research Contributes

Knowledge Contributions

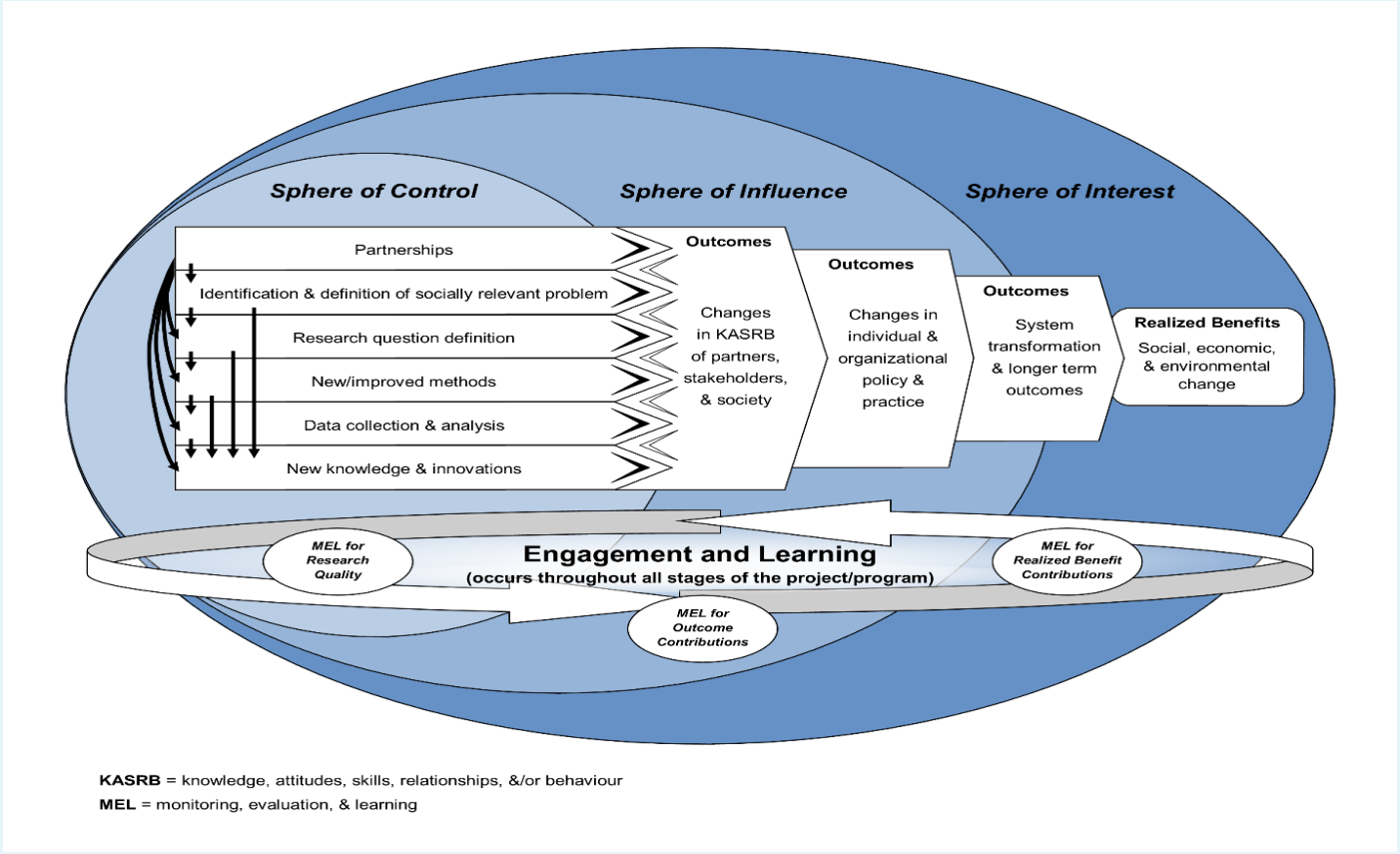
- Problem identification
- Conceptual understanding
- Challenge conventional analysis & "myths"
- Theoretical and/or empirical analysis
- Develop & test solutions
- Provide evidence-based recommendations & guidance
- Improve theory & methodology

# How Research Contributes (cont.)

Capacity & Process Contributions

- Build social & scientific capacity
- Provide fora and/or facilitate negotiated solutions
- Support institutions
- Influence policy & practice through multiple inter-linked pathways
- Influence research agendas

# Research for Development Theory of Change




**KASRB** = knowledge, attitudes, skills, relationships, &/or behaviour

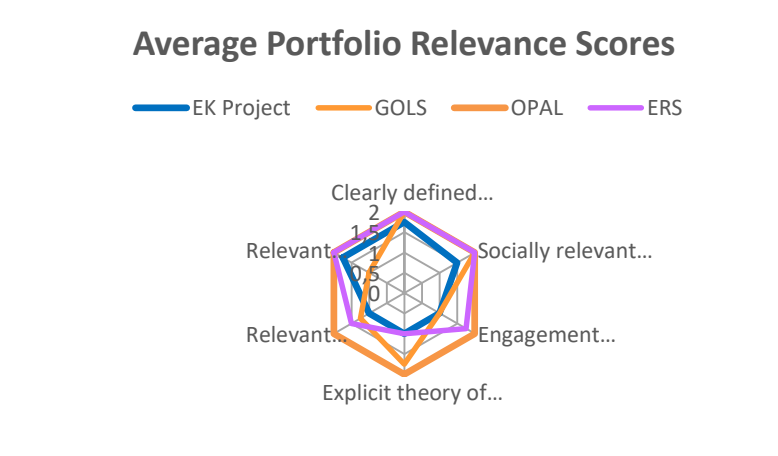
**MEL** = monitoring, evaluation, & learning

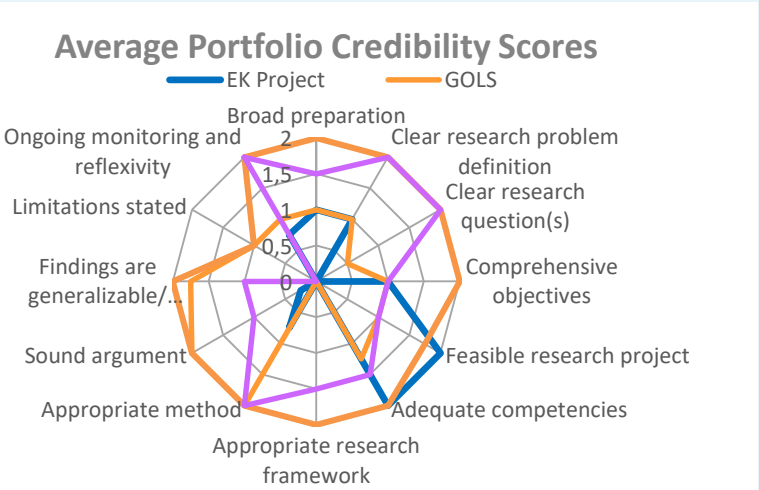
# TDR QAF Principles

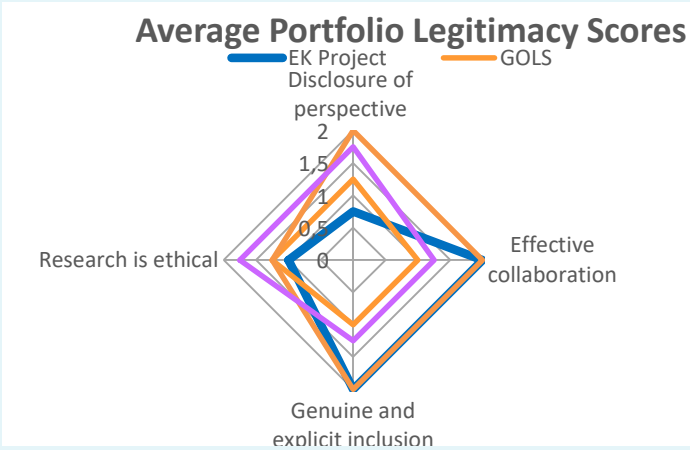
- In the sphere of control, the evaluative focus is on research quality
- TDR QAF has 29 criteria under 4 principles:
- Relevance - the importance, significance & usefulness of the research to the problem context & to society (6 criteria)
- Credibility - research findings are robust & sources of knowledge are dependable (12 criteria)
- Legitimacy - the research process is fair & ethical, & perceived as such (4 criteria)
- Positioning for use* - the research process is designed and managed to enhance sharing, uptake, and use of research outputs and stimulates actions that address the problem and contribute to solutions (7 criteria)

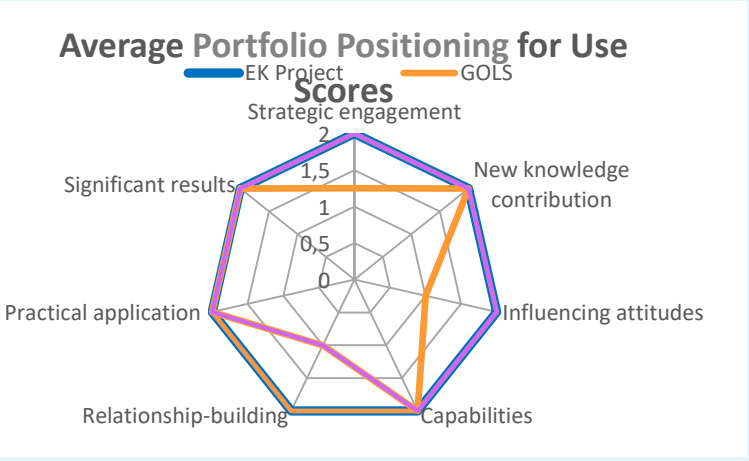
* Following Ofir et al 2016

# Key findings and results



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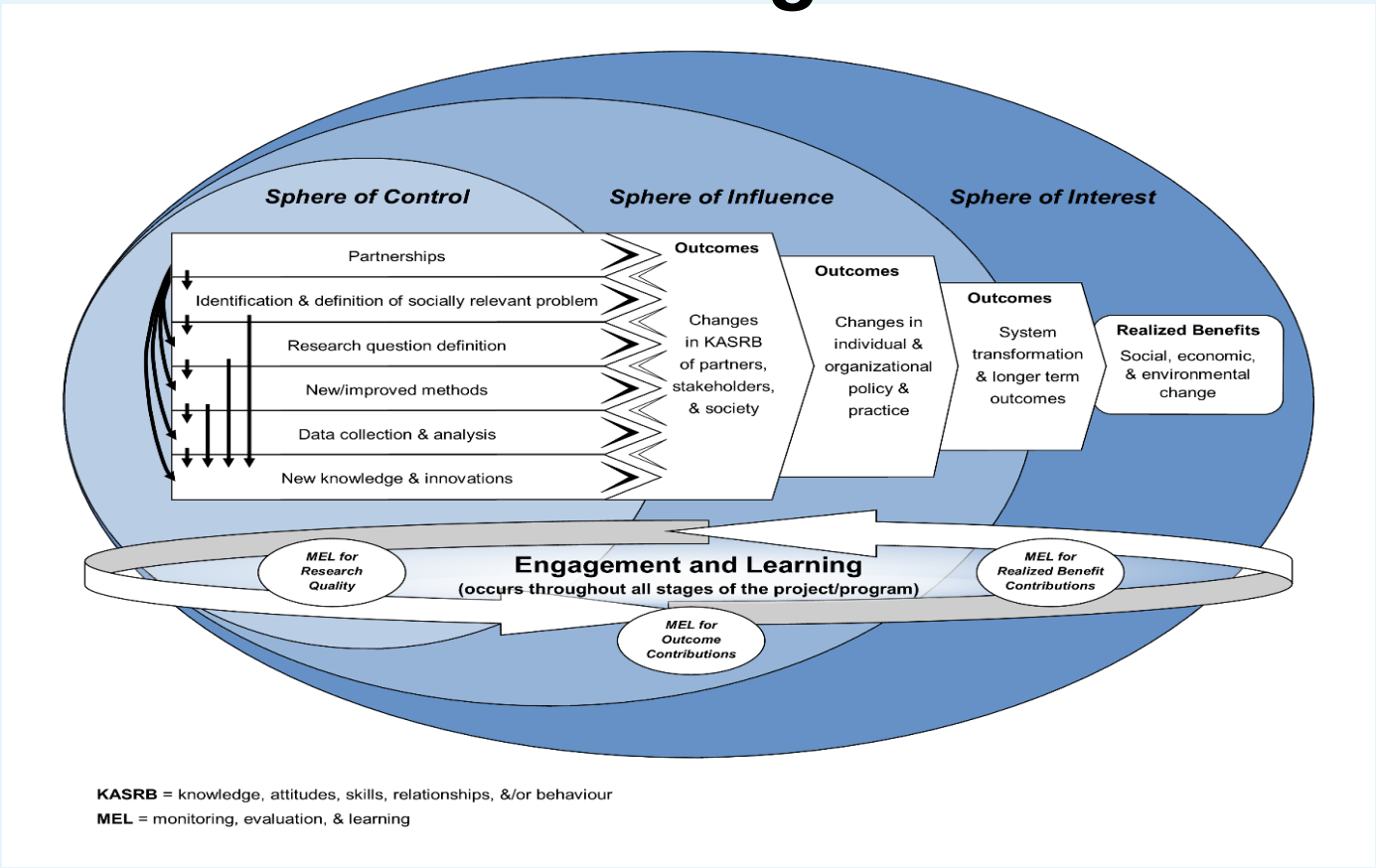


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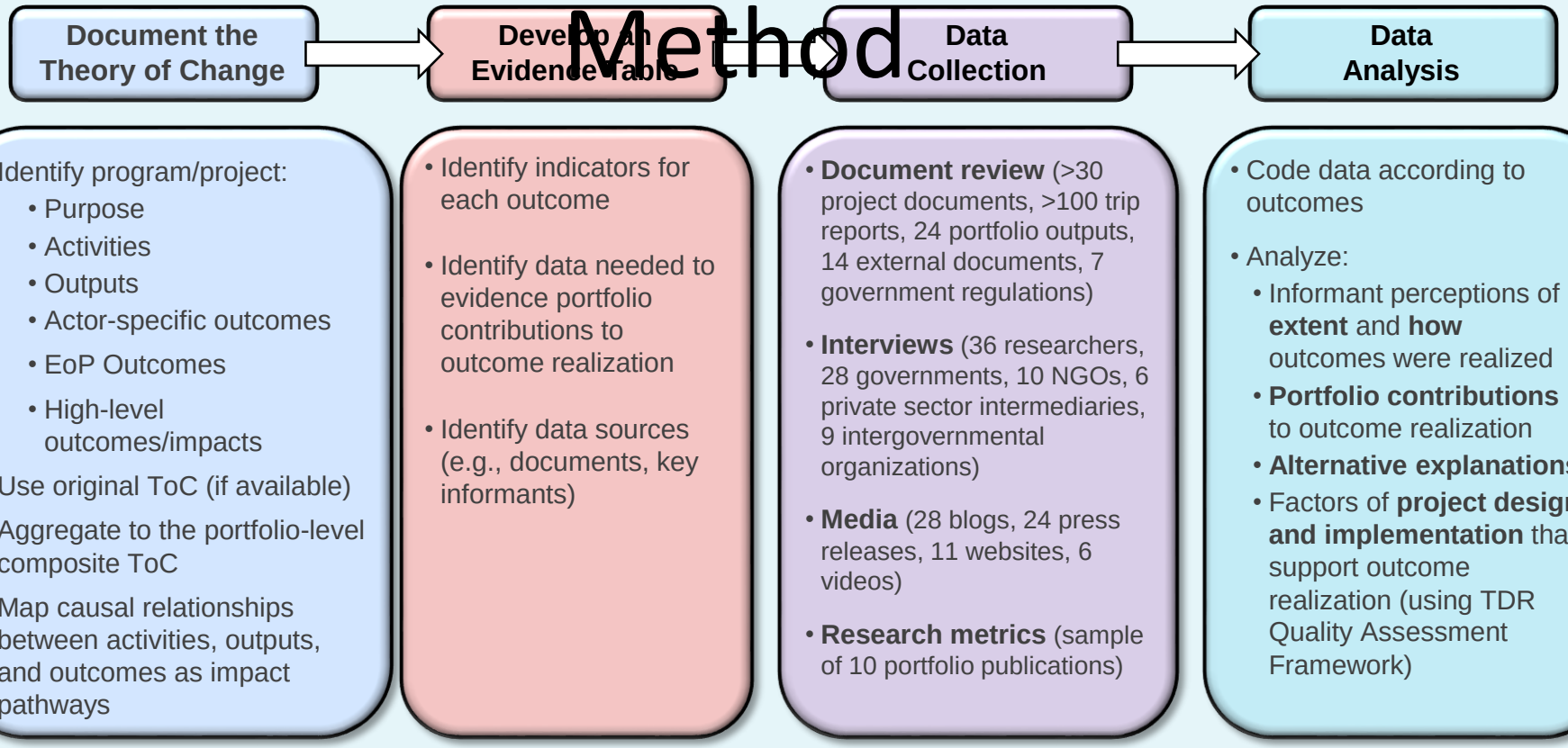
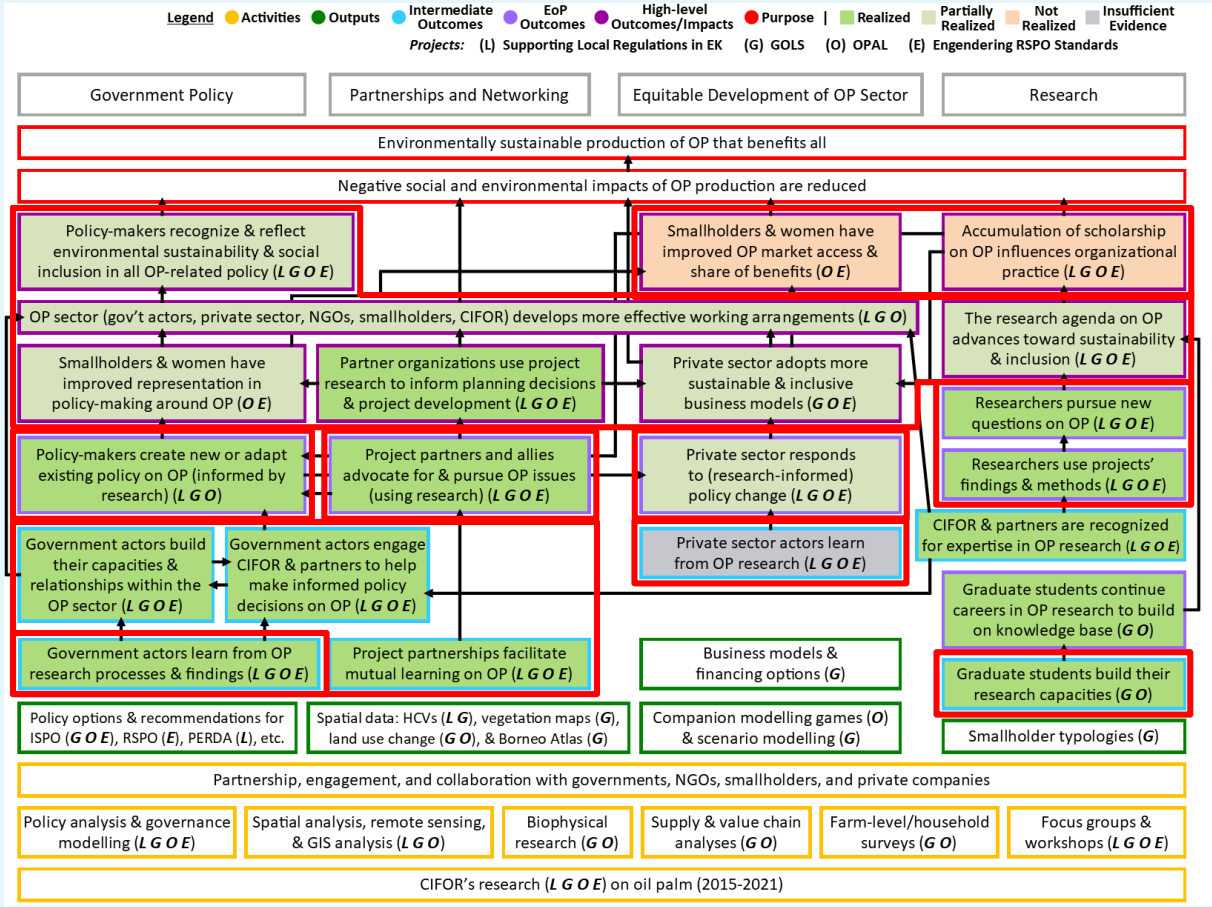
# Outcome Evaluation Method

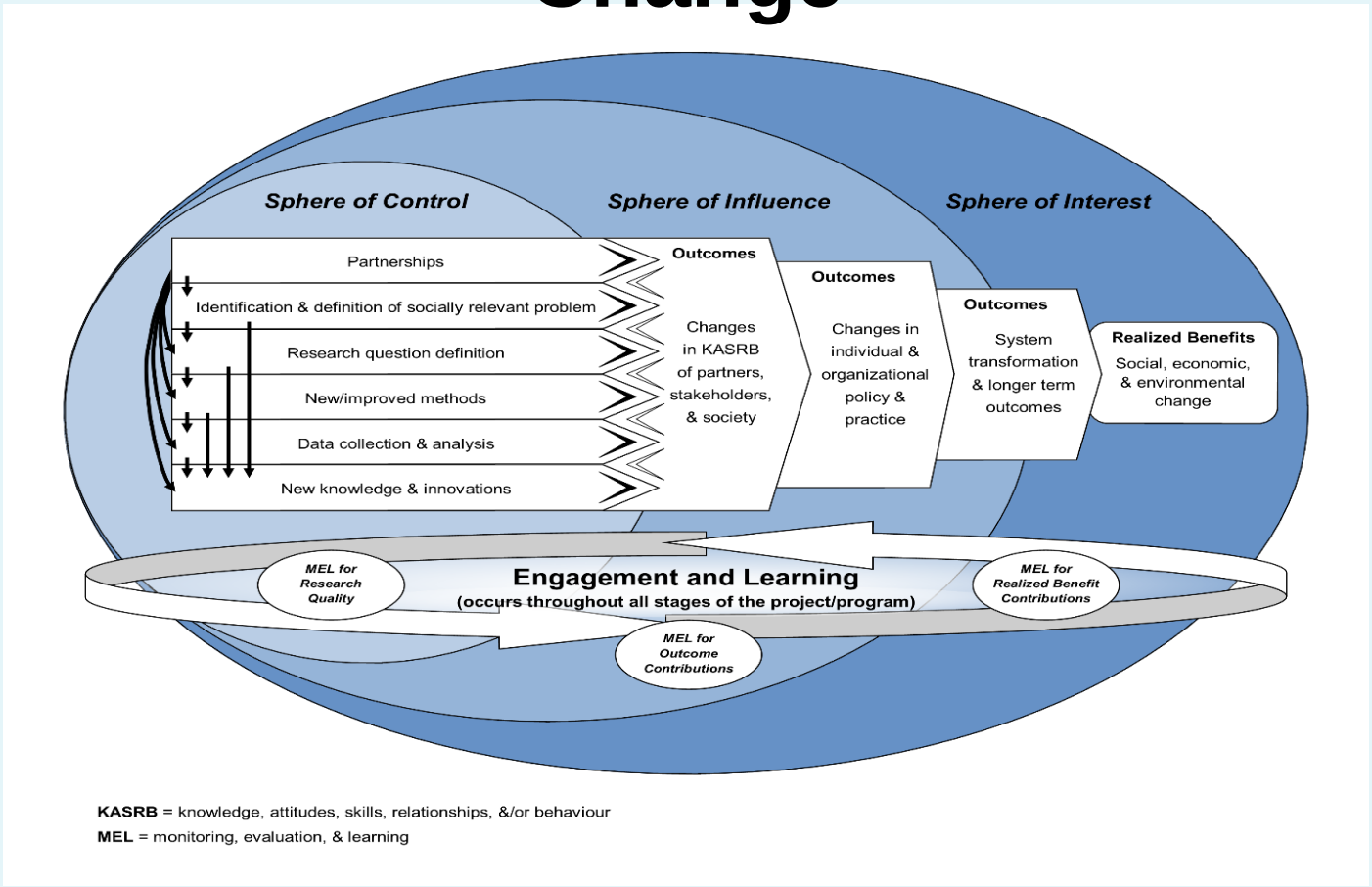


# Key findings and results




- 18 out of 21 outcomes partially or fully realized
- Some targeted policy changes observed (e.g., PERDA, RSPO)
- Partners and allies advocating for sustainable oil palm (e.g., Greenpeace)
- Private companies responding to policy (e.g., Wilmar, Golden Agri Resources)
- Researchers using and building on portfolio findings

# Research for Development Theory of Change

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# Contributions in Sphere of Interest

- Build on sub-program qualitative & quantitative assessments
- Modelling/*ex ante* impact estimation
- Cross-reference with high-level indicators and measures (e.g. SDG indicators)

# Impact assessment strategy framework for an SDG/Challenge Research

- Challenge framing
- Nested ToCs
- Research quality appraisals
- Theory-based outcome evaluation
- Experimental/quasi-experimental IA
- Ex ante impact estimation
- High-level indicators and measures

# References and Resources


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