



IMPACT AND IMPACT EVALUATION Estradivari

What is impact?

Changes or consequences that result from an action, event, or decision

- (Relatively) Long-term results
- Produced or influenced by a programme, project, or policy
- Intended and unintended results, positive or negative, direct and indirect impacts
- Vary across economic, social, environmental, and organizational domains.



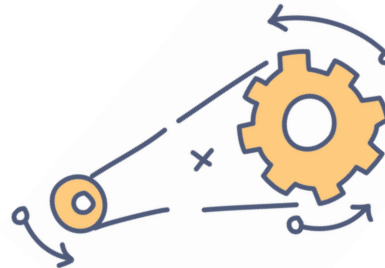
Why does impact matter?

Impact goes beyond immediate results to influence



Policies and Decisions

Data-driven insights shape organization/ project standards, regulations, and policies.



Business and Process Improvement

Supports better productivity, cost savings, and efficiency.

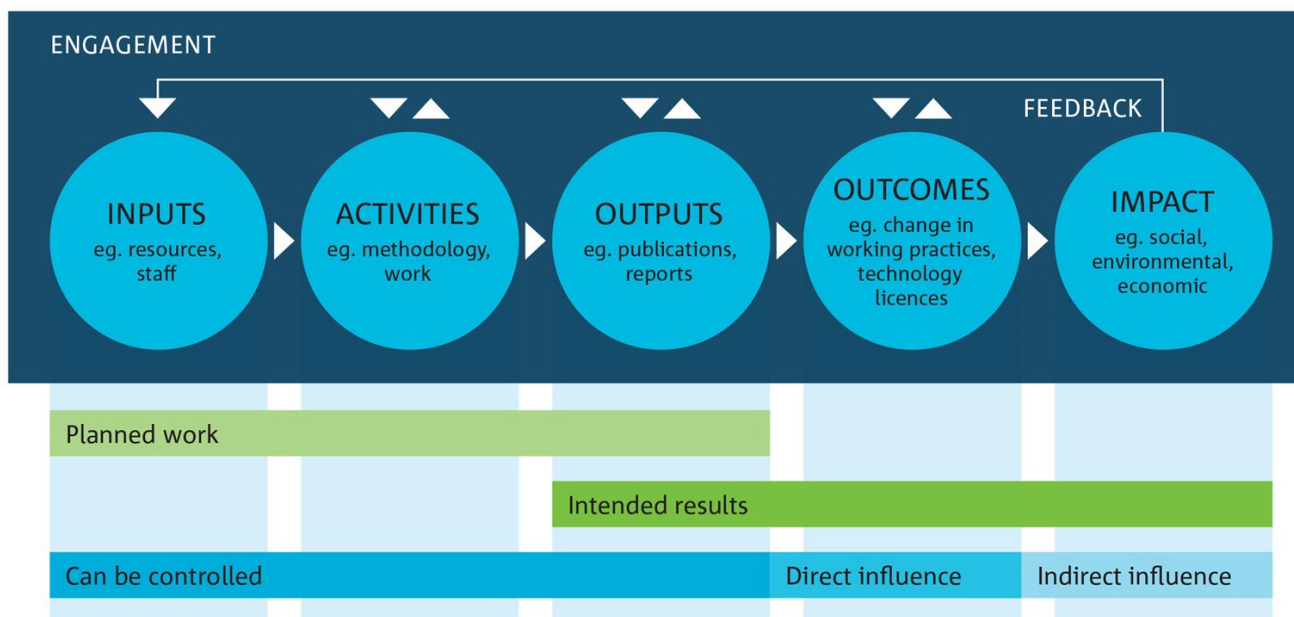


Social and environmental outcomes

Data science projects can contribute to public health, sustainability, and community well-being.

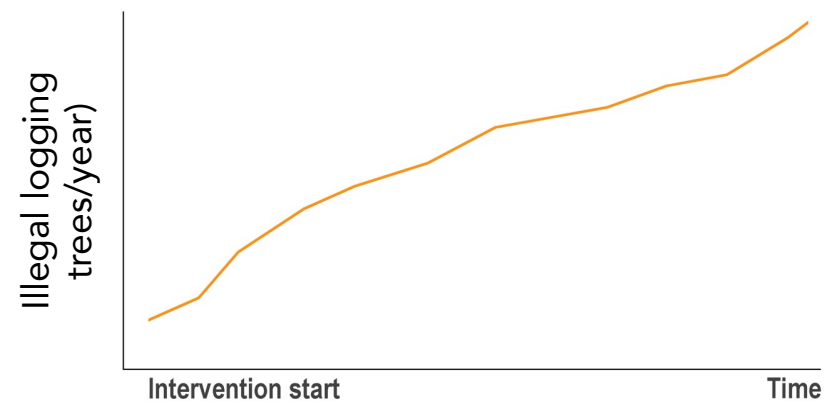
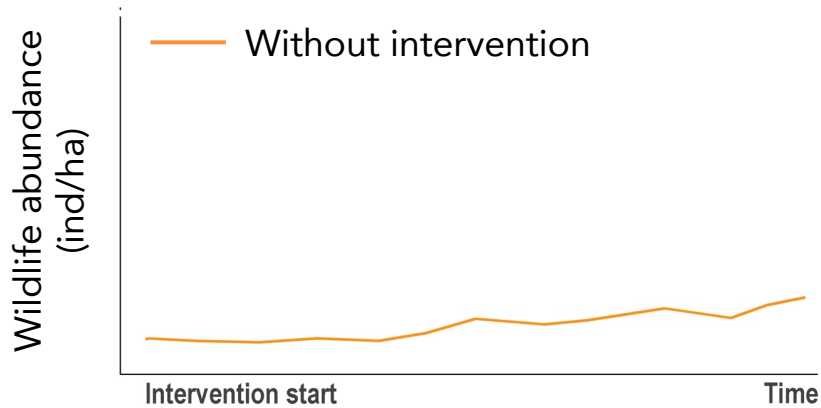
What is the pathway to impact?

Impact is achieved through a series of steps in a project's lifecycle

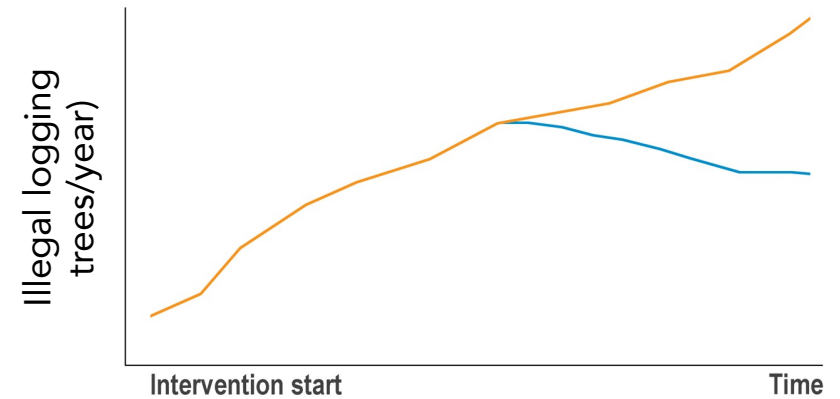
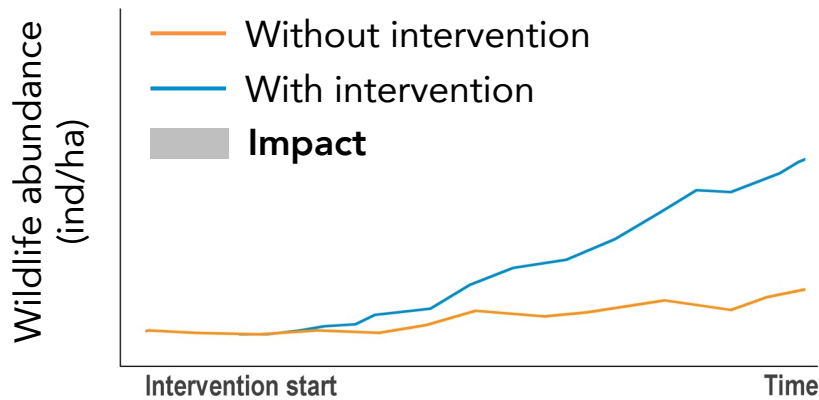
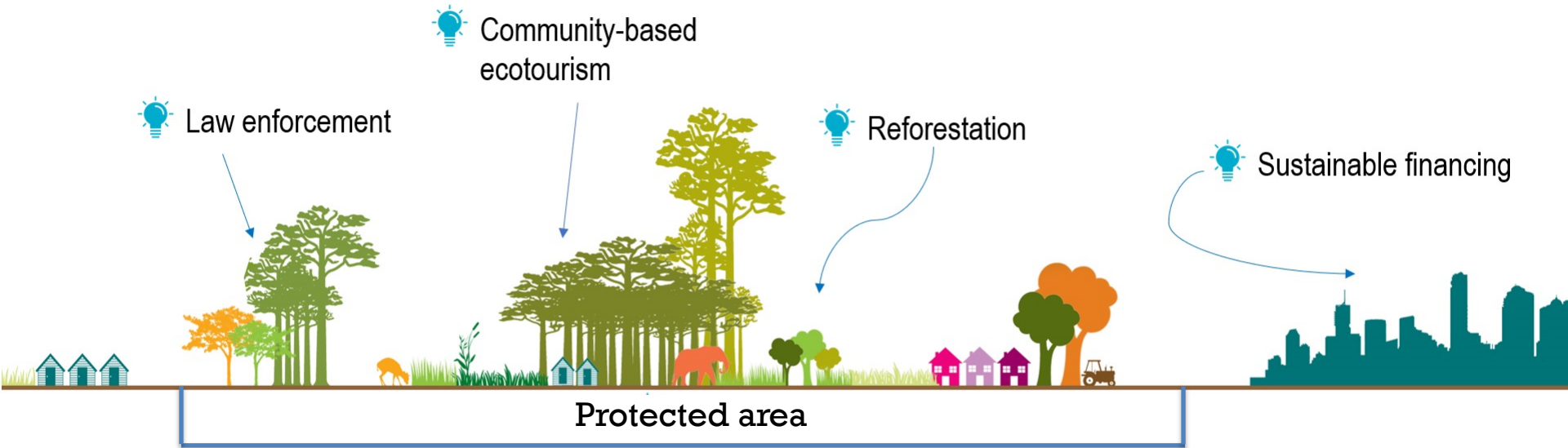


Impact Framework derived from the work of the *W.K. Kellogg Foundation*

Impact example: Protected area



Impact example: Protected area



Why impact evaluation?



Advocacy

Demonstrates the value of programs and investments in data science



Resource allocation

Guides decisions on funding, staffing, and other resources



Continuous improvement

Provides insights to refine and improve program design and execution



Accountability

Helps meet legal requirements and supports performance management

Impact evaluation ensures that data science initiatives deliver meaningful, measurable results and drive ongoing value.

How to design impact evaluation framework?

- 1 Identify key stakeholders** *Involve stakeholders to focus the evaluation on useful insights*
- 2 Outline relevant impact** *Define which impacts are expected and how they may be produced*
- 3 Develop key evaluation questions** *Identify questions that will guide the evaluation approach*
- 4 Select method and design** *Choose appropriate methods to answer each evaluation question*
- 5 Share and apply findings** *Report findings and support stakeholders in applying the insights*

How to design impact evaluation framework?

Example of impact evaluation questions for data science management

- What are the likely impacts of data science management programme or policy if it is undertaken?
- What have been the actual impacts of data science management programme and policy?
- Did the open-access research data policy implementation make a difference?
- How much of a difference did the new spatial analysis software make?
- For whom, in what situations, and in what ways did the data science capacity building make a difference?
- To what extent can a specific impact be attributed to the use of artificial intelligence for research in our organization?
- Will the data storage system work elsewhere?
- What is needed for the data storage system to work elsewhere?

Each question may require a different bundle of methods to answer

When to do impact evaluation?



Ex-ante evaluation: Before the program begins—estimates likely impacts to inform design

During implementation: Checks if the program is on track to deliver intended impacts

Ex-post evaluation: After program completion—assesses actual impacts and informs future decisions

Key points for effective impact evaluation



Context matter

Consider social, economic, and cultural factors



Ethics and responsibility

Ensure transparency, fairness, and ethical safeguards



Use mixed methods

Combine quantitative and qualitative approaches



Maintain independence

Stay objective and free from bias



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