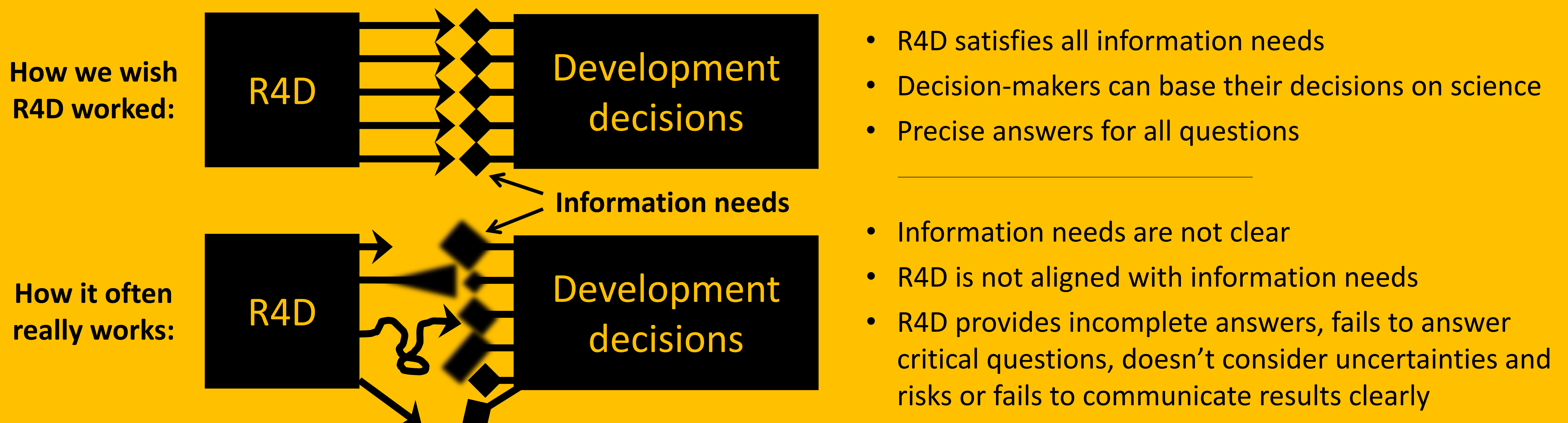
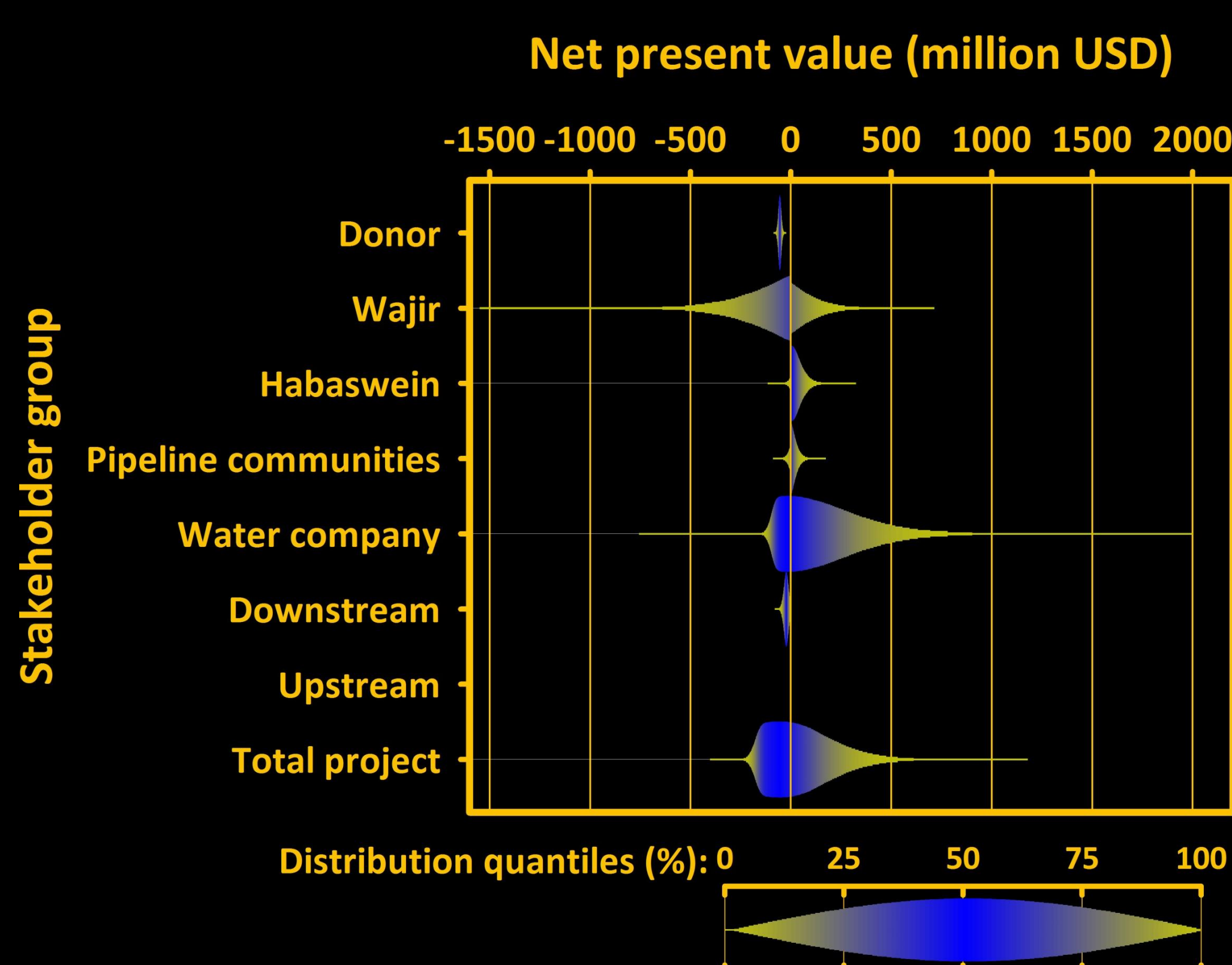


Research for development (R4D) is often not aligned with decision-maker needs



A water pipeline to Wajir in Northern Kenya

- Aims to provide safe drinking water to Wajir
- Would tap the politically sensitive Merti aquifer in Habaswein (about 110 km away)
- Controversial decision currently in progress
- What are the impacts for different stakeholders?
- What are the costs, benefits and risks?
- Stakeholder discussions during two workshops
- Participatory model building (team of 8 experts)
- Several rounds of feedback and updates
- Probabilistic simulations (Monte Carlo analysis) for different stakeholders
- Identification of important uncertainties



Plausible net present value distributions for all stakeholder groups (Figure above)

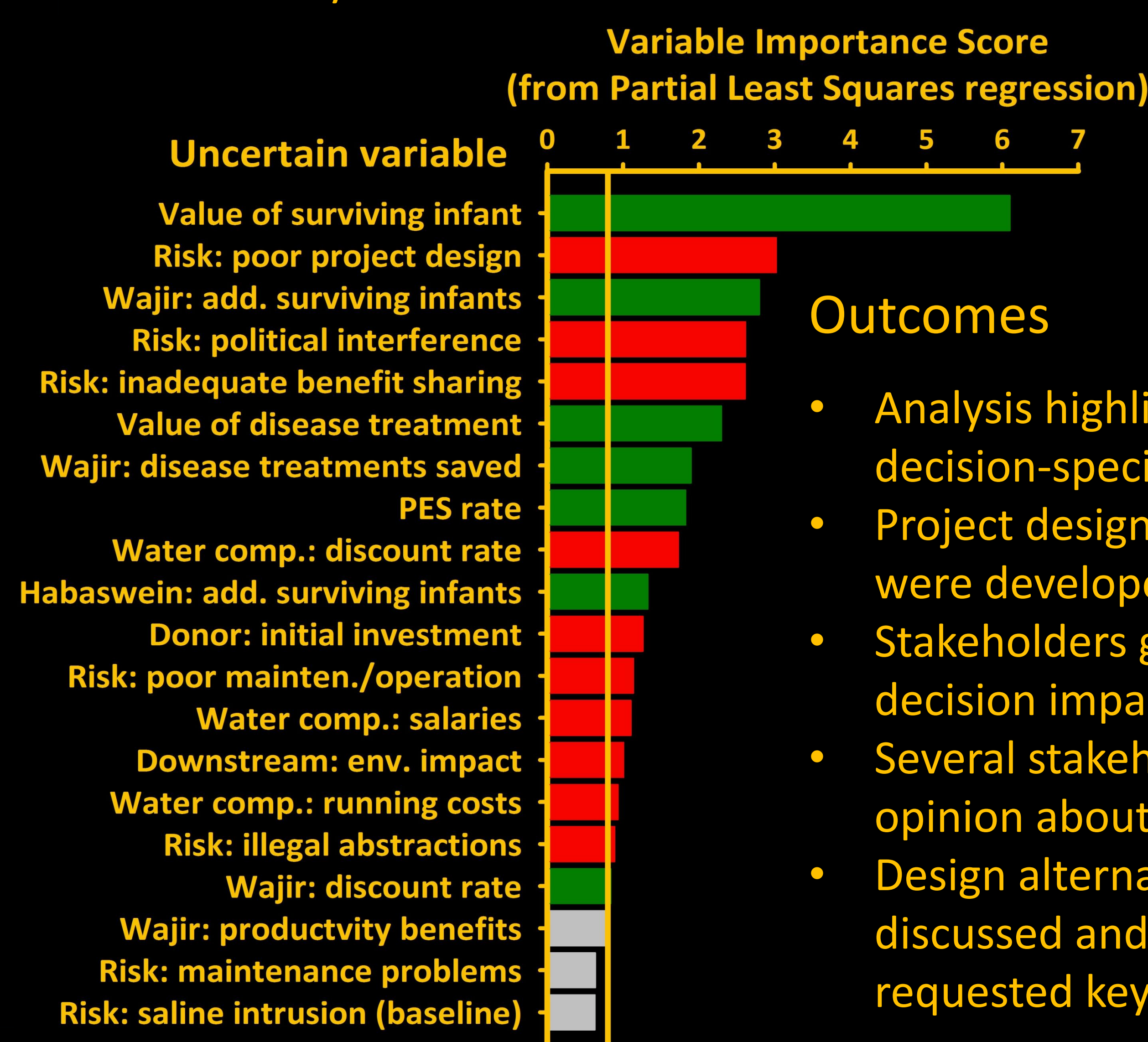
- Risky project with positive and negative outcomes possible for most stakeholders
- Prospects for Habaswein better than for Wajir

Decision analysis

- Application of business analysis techniques in development contexts
- Focused assessment of concrete decisions
- Inclusion of stakeholders and decision-makers in research process
- Participatory development of holistic decision impact models
- Simulation of decision impacts with the current (pre-research) state of uncertainty
- 'Fuzzy' projection of decision outcomes that does justice to uncertainties and risks
- Identification of high-value information, i.e. knowledge gaps that should be closed to allow better decisions

Important variables in the decision model (Figure below)

- Major uncertainties about how to value reduced infant mortality
- Risks of poor project design and political interference are major sources of uncertainty



Outcomes

- Analysis highlighted priorities for decision-specific research
- Project design recommendations were developed
- Stakeholders gained clarity on decision impacts
- Several stakeholders changed their opinion about the project
- Design alternatives are being discussed and decision-makers have requested key measurements

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