



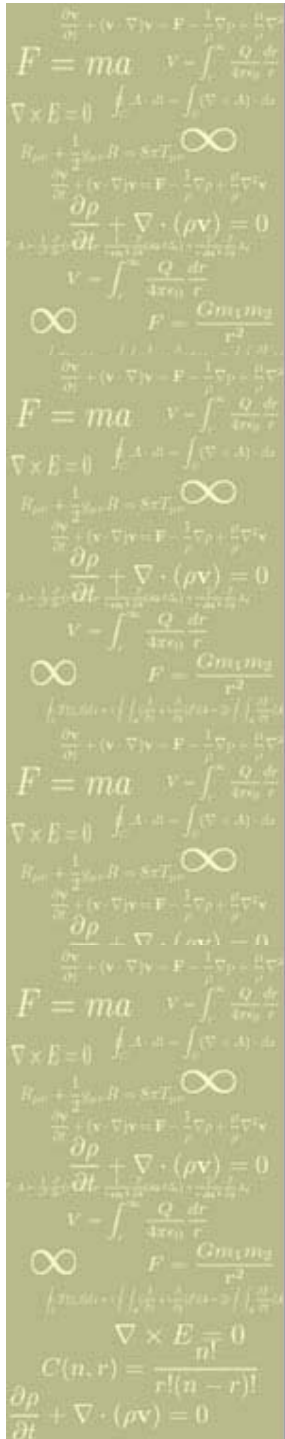
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What exactly are you asking?

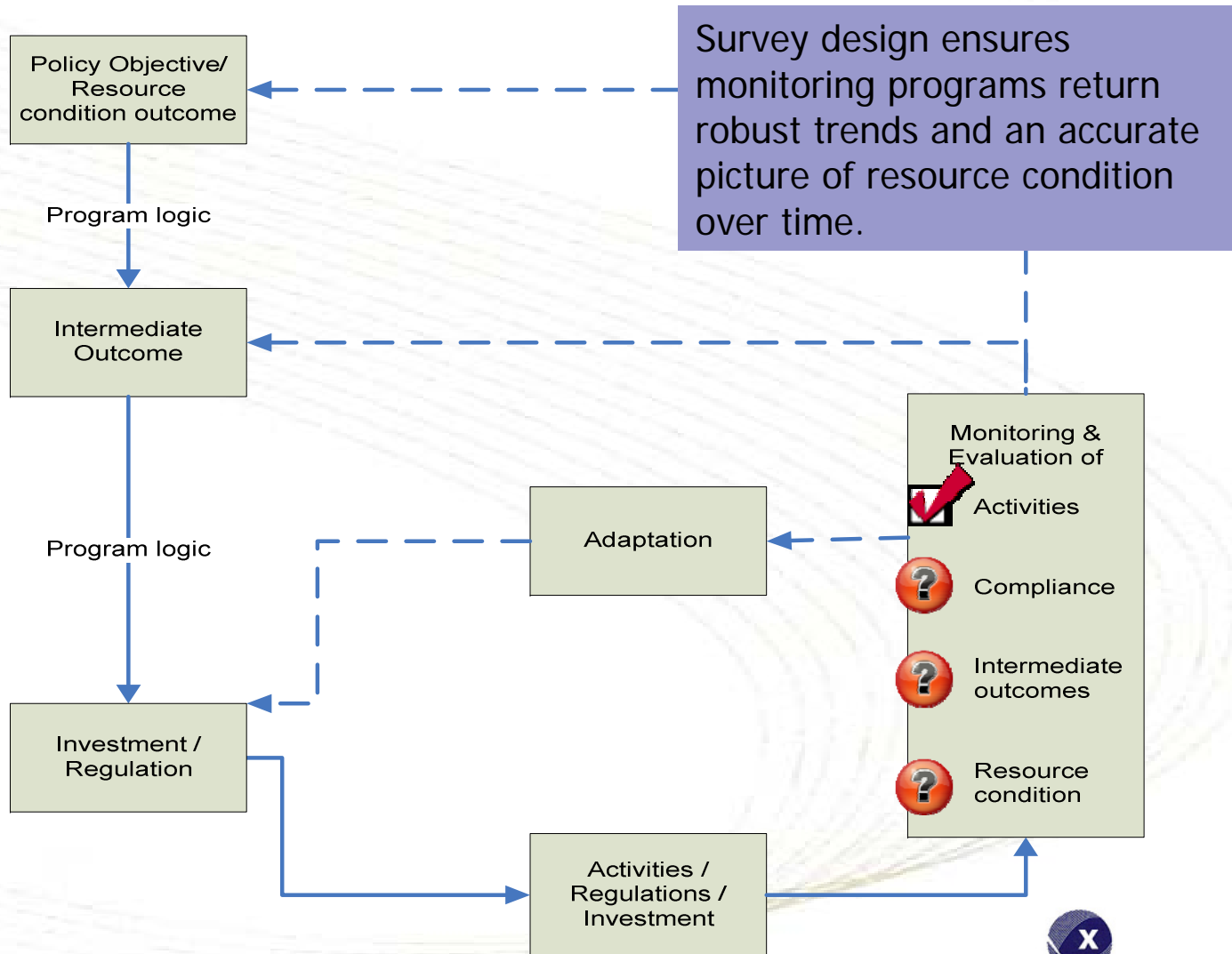
The role of survey design in policy implementation

Dr Elizabeth Stark, Dr Stuart Muir

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Survey Design in the MERI cycle



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Survey design is about...

... choosing **what** to monitor (“it”) and **how to collect data** in an optimum way to allow

- Trends towards intermediate outcomes
- Trends in Resource condition
- Trends relating to compliance
- Whether our program logic assumptions are valid.

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Survey Design exposes and minimises errors

Every monitoring program has a chance of getting it wrong. We may detect an impact where there is not one (leading to unnecessary intervention or undeserved fines). If we Don't detect an impact where there is one, there are potentially high costs in terms of the environment.

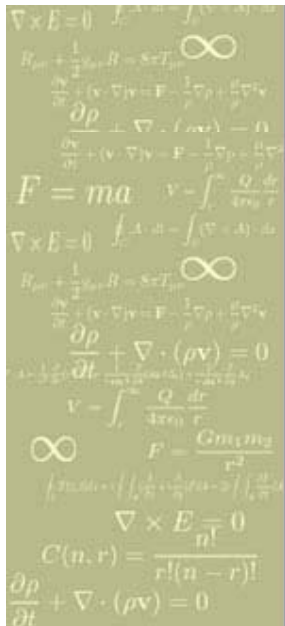
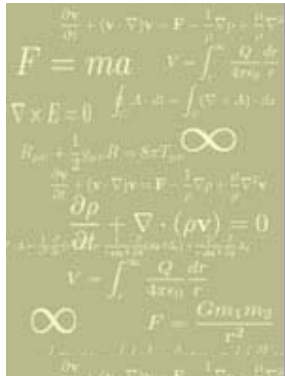
It is only through a designed survey approach, with significance and power analysis carried out in the planning stage, that we can understand the potential (and the cost of) these errors.

		True impact	
		Yes	No
Detected impact	Yes	✓	✗
	No	✗	✓

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Steps in survey design – What is “it”? (what are we trying to measure?)

- For investment programs:
 - Raised level of appreciation for biodiversity values
 - X% less vegetation threats on farms
- For compliance programs:
 - Less than X birds per year struck by wind turbines
 - Less than X% decrease in fish population downstream from development runoff

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Steps in survey design – Can you measure IT?

- Evaluate choice of metrics
 - Physically difficult
 - Too vague (i.e. stream health)
 - Too specific
 - Timelines (what does one in a year mean?)
 - Representative and repeatable

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Steps in survey design – Can you accurately detect “it”?

- Baselines
- Trends
- Effect size
- Power analysis and significance
- Balance error types

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Steps in survey design – Can you adapt “it”?

- Strength
 - i.e. if population doubles/halves will the monitoring program still detect change?
- Robustness
 - Want to give on-ground guys some leeway in collection

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Designed approach ensures

- Reduces wasted resources in ineffective monitoring programs

Policy

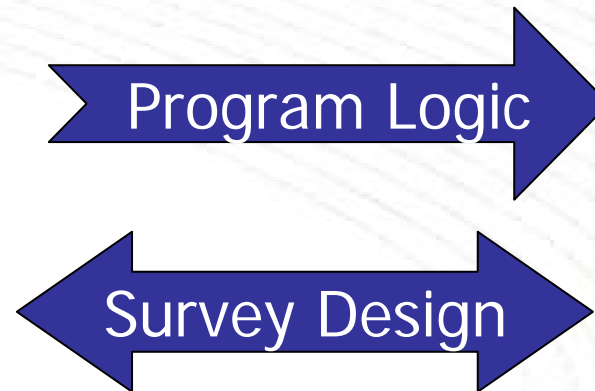
Objectives

/

Resource

Condition

Impact



On
Ground
Actions

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Roles and responsibilities

- Policy makers/ program investors /regulators:
 - Clear policy statements
 - Survey design approach to outline monitoring requirements and guidelines
- On-ground
 - Contribute to survey design (practical considerations)
 - Consistent reporting and analysis

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For more examples on the application of survey design to policy, investment planning and monitoring and reporting, contact Symbolix:
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