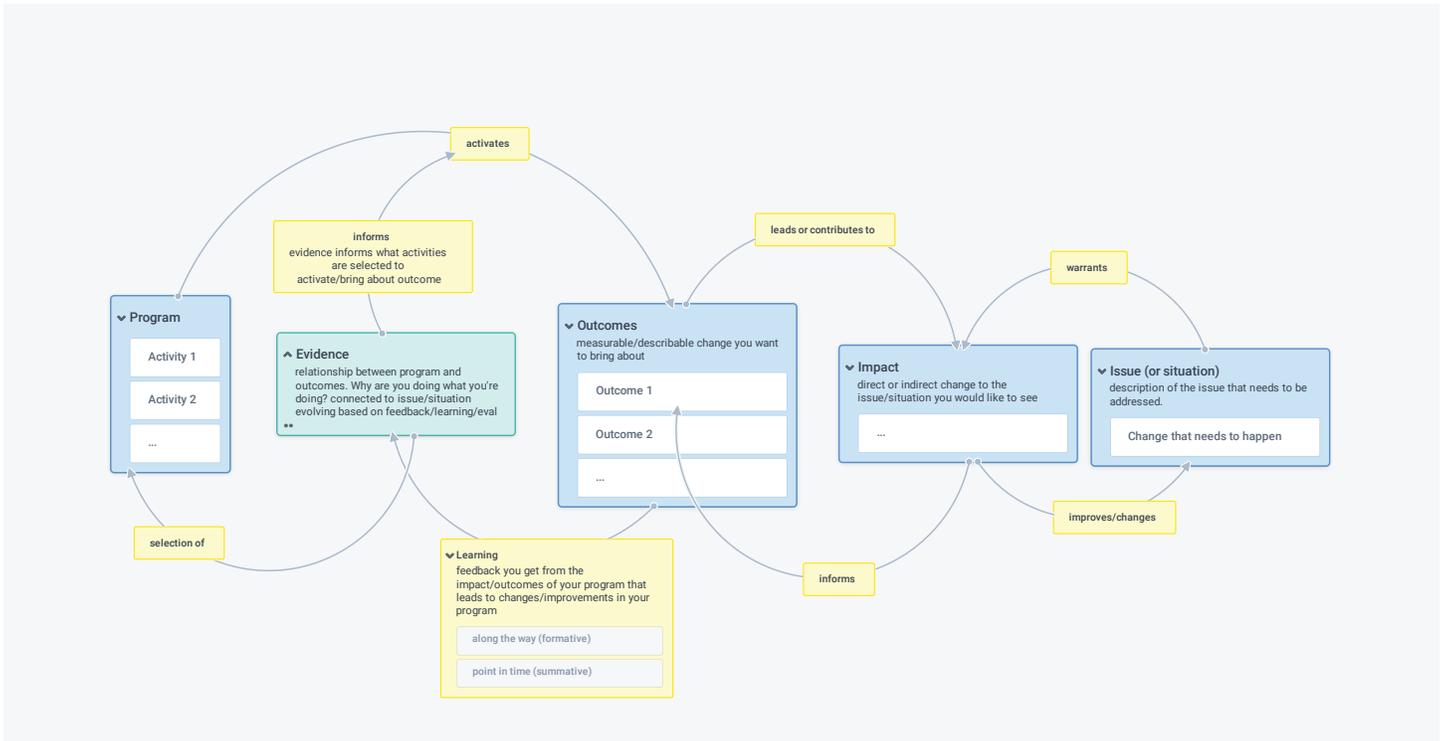


# Program Development and Evaluation Using Systems Thinking

# Workbook



Systems Program Development & Evaluation

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## Primary questions to begin your program development:

What is the issue you are trying to address? How would you like to see this change?

What outcomes are you trying achieve?

What program are you going to do to achieve outcomes?

How do you know if you were successful?

## Understanding the Issue

Provide a description of the issue that needs to be addressed. Describe as accurately and thoroughly as possible. Consider:

- What do you understand as the cause(s) of the problem/issue?
- What are the key perspectives to understand?  
What does the issue look like from those perspectives?

Brief examples:

- 1) Habitat is declining for native plant and animal species. This is resulting from housing development, infrastructure development, recreational use, climate change, and invasive, exotic species. Key perspectives include landowners, landscape companies, native species, plant sellers, federal and state agencies, local government, and recreation users.
- 2) Lake and stream levels have declined in recent years with multiple streams drying up during late summer and lake levels falling below levels to allow access to the lakes. This has resulted from seasonal lowering of aquifer levels, reducing groundwater flow into these water bodies. Large capacity wells are the primary cause of the decline in groundwater levels. Key perspectives include lake and stream landowners, state and national regulatory agencies, municipal water users, farmers (particularly those near the water bodies), fish and other aquatic life, and anglers.



**Describe the situation:**

A large, empty rounded rectangular box intended for describing a situation.



## Impact

The impact is the direct or indirect change to the situation/issue you would like to see. These are long-term changes. You likely won't see this change at the end of a program. The primary question to answer is:

- What needs to be changed to resolve or improve this issue?

Examples:

- 1) Invasive species need to be removed, or dramatically reduced, from the landscape.
- 2) Groundwater levels need to be maintained within the range of natural fluctuations.

Describe the impact you'd like see:



## Program outcomes

Program outcomes are the measurable or describable changes resulting from your program. These could be changes in participants' behaviors, capacity, knowledge, and skills. Program outcomes should contribute to impact you'd like to see.

Examples:

Outcome	Relationship to impact you'd like to see
1) Increase participants' sense of place	Through increasing sense of place, people have a deeper ecological knowledge and are more inclined to care for their natural and human communities. Therefore, as a community, they will help decrease the spread of invasive species, improving habitat for native species.
2) Decrease participants' water use	Incrementally reducing water usage by individuals adds up to large decreases in water use by the community, decreasing groundwater withdrawal.



Describe the specific changes you are hoping to create through your program. These changes should be directly connected to the situation you described. You may not be trying to accomplish all the changes you want to influence with any one program. You should be able to clearly describe how the outcomes contribute to the impact you'd like to see.

Outcome	Relationship to impact you'd like to see



## Developing the Program

The program is how you plan to bring about the outcomes you desire. Your program may include just one activity or multiple activities. Consider what evidence you have to base your programmatic activities. That is, why is you are choosing to do a certain activity? What evidence do you have that it will be successful? Your base of evidence could be formal documented evidence, a hunch, or an uninformed starting place – be conscious of the evidence being used. Your goal should be to continue to develop your evidence base to continue to improve your program.

Programmatic activities should be directly connected to the core concepts, skills, and/or capacity you are trying to build. The purpose of an activity is to activate that concept/skill/capacity. (note: see the M:A:C - Map:Activate:Check - information on the ThinkWater website).

### Examples:

Programmatic activity	Desired outcome	Evidence that the programmatic activity will result in outcomes
1) Introduction to your natural neighbors - forest walk	Increased sense of place	Research on sense of place and reciprocity ( <a href="http://www.susted.com/wordpress/?p=6644">www.susted.com/wordpress/?p=6644</a> )
2) Personal home water assessment	Decreased personal water use	Anecdotal information, personal experience with forest management and peer contact



Programmatic activity	Desired outcome	Evidence



## Evaluating the Program and Outcomes

Program evaluation is about learning from your efforts and outcomes to iteratively make program improvements. Evaluation activities are ways to get feedback from your program, they can be simple and/or complicated, formal and/or informal. Effective evaluation starts with clear evaluation questions - methods and instruments come later.

Evaluation questions are the broad questions you want to collect information/data about. The questions are specific to your program. Example evaluation questions are: Did [my audience] learn how to delineate a watershed? How have [my participants] changed their behaviors since experiencing the filter for lead in drinking water program?

Evaluation strategies, methods, instruments (eg, survey), and items (eg, an activity you have participants do, the questions on a survey) all follow from the broad evaluation questions you develop. These might occur during the program or after, they might be formal, stand alone methods or they might be part of the program itself (e.g., an activity for the participants that allows you to assess understanding).

Example evaluation questions:

- 1.1 Did participants develop a deeper sense of place?
- 1.2 How did participants' sense of place influence their behaviors about invasive species?
- 2.1 Do participants know ways they can reduce water use in their homes?
- 2.2 To what extent have participants' water use changed since the program?
- 2.3 What are the reasons for participants changing their water use?

Examples of **not** evaluation questions:

- 3.1 On a scale of 1-5 rate your satisfaction with this activity?
- 3.2 How did your knowledge of invasive species change during this program?
- 3.3 What water saving strategies do you use?

Evaluation questions: What do you want to know about your program? Draft 2-3 evaluation questions.

1.

2.

3.



Now you can begin thinking about ways to answers those question.

Examples:

Evaluation question	Method/Strategy to Collect data/information	Specific considerations
1) Did participants develop a deeper sense of place?	Pre and Post Interview	Questions about ecological knowledge, place attachment (emotional connection) Need about 1 hour per participant
2) Do participants know ways they can reduce water use in their homes?	Program activity	Put a marble in a bucket representing major water using activities at home (which uses most water?). At the end, do same activity to compare knowledge.
3) To what extent have participants' water use changed since the program?	Survey - 6 months after the program 2 to 3 questions	Post card survey, need to do follow-up reminder (also ask a question about reasons why there were changes)

Evaluation question	Method/Strategy to Collect data/information	Specific considerations



## Stepping Back

One of the most important aspects of program development and evaluation is alignment or correlation. That is, the relationships between all of your program development elements is as important, or maybe even more important than, the development elements themselves. Take time to step back to make sure that there is clear correlation between your understanding of the issue, the outcomes you want to see, the program you are offering, and the evaluation you are doing. You should be able to clearly describe the relationships between all of these parts of your program. Most likely there are gaps or assumptions that aren't clear or tested (that's true for all of our programs), our goal is to create greater alignment through feedback (evaluation) and clearer thinking.

- What are the clearest and most strongly correlated aspects of the program you have developed in the preceding pages?
- What are the weakest relationships between the program elements?
- What assumptions do you need to test?

Use DSRP questions to clarify and strengthen your map. Here are a few to consider:

- Distinctions (D): Are there clear distinctions between your outcomes? Are your desired outcomes distinct enough to be effectively evaluated?
- Systems (S): Can any of the parts of your map be broken into smaller parts to help clarify? Are there ways to organize the parts of your map into a different system that makes more sense? Are there other systems influencing your program that you need to identify?
- Relationships (R): Are there relationships you haven't identified? Are there relationships you have identified, but haven't described?
- Perspective (P): From what perspective is your map created? Are there other perspectives from which it's important to view this situation and program?

### Collective Impact

It's also useful to consider other related efforts. Are there other programs that are attempting to impact the same issue? What strategies are they taking? What is the relationship between your program and theirs? Are there effective strategies that can be shared? Are there opportunities to co-learn from feedback being received?



**Notes:**