

# Adaptation in Action

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## ADAPTING TO RISING TIDES PROGRAM

### Purpose

Build capacity among decision-makers and other stakeholders using collaborative problem-solving to understand and consider the relevance of your adaptation planning project's outcomes for policy and funding decisions and planning priorities.

### Approach

Exercise participants develop an understanding of how building different adaptation responses can result in trade-offs, and affect resilience across sectors and geographic scales including neighborhoods, cities and regions.

They do this by exploring different “action pathways” to develop an adaptation response that addresses a planning issue and helps achieve resilience goals. Participants work in small groups to select from a pool of adaptation actions and determine in what order and at what scale those actions could be implemented, and how the order and scale can affect outcomes.

### Outcomes

1. Participants increase their understanding of:

- What an adaptation response includes
- How the sequence in which adaptation actions are taken up and the scale at which they are implemented can affect their capacity to achieve desired outcomes.
- The possible unintended or secondary consequences of the adaptation actions on people, economy and environment.

### The Three Components of an ART Adaptation Response

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1 The **vulnerability** being addressed by the adaptation response. Including this provides a direct link to the outcomes of the assessment and ensures that the most critical issues are addressed. Identifying the key vulnerability that is addressed is a transparent way to ensure that each adaptation action is connected to a planning issue.

2 **Adaptation actions** (one or more). While some vulnerabilities can be addressed by a single action, most require multiple, often coordinated actions. Some actions can be taken at the same time, while others require a series of sequential steps that incrementally build towards resilience.

3 **Implementation options** for each action.. These provide alternatives for initiating adaptation actions such as incorporating them into existing planning or processes or creating new initiatives. The options also should identify agencies and organizations – public and private – that have a role in implementing the actions.

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## When to use this exercise...

This exercise provides a means for the project team and working group to touch base with other stakeholders and bring them up to speed and share project outcomes. It is most effectively used once the key planning issues have been identified for the project and the adaptation responses are taking shape (i.e., the working group has already reviewed and provided input on the responses). The exercise will help to familiarize decision-makers and other stakeholders with adaptation responses and key implementation considerations, including the sequence and scale at which actions are implemented.

An additional option for this exercise is to develop it as a charette for a deeper exploration of specific adaptation actions and implementation options for a key issue that project participants have identified needs further assessment or priority action.

## Logistics

This exercise requires at least 1 hour:

- Allow 15 minutes for the introductory presentation to the exercise. The exercise itself (in small groups) requires 30-40 minutes. Another 10-15 minutes is needed for the lightning round debrief.

This exercise requires a project team member or other facilitator at each table to run.

- Each small group discussion should be led and facilitated by a project team member or working group member who is prepared to introduce the material and answer questions, remind participants of the purpose of the exercise and keep them on track, and ensure that the group considers the project resilience goals and the key issues. It is helpful to have another staff member or working group member assigned to each group to take notes and photograph the action pathways.

Due to the complexity of this exercise, it can be helpful to assign participants to groups (instead of allowing them to self-select) to ensure a range of expertise and interests are represented in each group. In the meeting invitation and reminders, ask for attendees to RSVP in advance. At the meeting, during the exercise introduction, assign any unexpected attendees to groups as needed.

# 1. Prepare

## Developing Content

Review the key issues that were defined for the project and select one that is sufficiently complex to allow participants to:

- Explore multiple scales of implementation and sequencing for the adaptation actions; and
- Identify the effects of these choices on reducing vulnerabilities and meeting project resilience goals.

It will help to ask the working group members in advance of developing the exercise if there is a key issue that they would like to use or if they are prepared with further information for the key issue that is selected.

Remember that this exercise primarily serves an educational purpose, and select a key issue from the project that will provide participants with a rich learning opportunity in which they can explore a variety of adaptation actions and implementation options. For some audiences, the exercise purpose may be best achieved by using a fictitious issue and adaptation actions.

Identify the expected outcomes of addressing the key issue, including the effects on resilience goals and the ability to reduce the consequences on people, economy and environment as efficiently as possible, while ensuring that the four frames are considered when assessing unintended and indirect consequences.

Select at least five, but no more than 10 adaptation actions that participants will use in the exercise. Ideally the adaptation actions for addressing the selected key issue are diverse enough to allow participants to work with various types of adaptation responses and to see how, in many cases, the different types of actions can work together to provide a more comprehensive approach to addressing the issue. For example:

- Evaluation – actions to improve data and information or conduct new analyses
- Program/Operation – actions to update plans, procedures or management activities
- Policy development – actions to develop or revise policies and guidelines
- Coordination – actions to initiate or expand partnerships to facilitate and drive further development

### Be Prepared!

This exercise requires significant preparation by the project team and time to conduct with participants during a meeting or workshop. Consider that after introducing the purpose and overall approach for this exercise, the project team members will:

- Present a key issue and discuss how this issue is tied to project resilience goal(s)
- Present a set of desired outcomes for achieving the goal(s) against which success of participants' action pathways can be measured
- Provide to, and familiarize participants with, a pool of adaptation actions that can be used to build a response to the key issue, and explain the (geographic/ organizational) scales at which these actions might be implemented
- Help participants through a process of determining in what sequences and at what scales the actions could be implemented to achieve various key outcomes with different trade-offs

Each of these steps requires content development and preparation.

and implementation of adaptation actions

- Education/ outreach – actions to communicate information and build awareness among key audiences (e.g., elected officials, community leaders, professional associations, etc.)

Additionally, the geographic scale of implementation can be equally important to assess. Depending on the issue, some or all of the following geographic scales of implementation may be considered in the exercise:

- Site-specific – actions that can be implemented for a particular location or facility
- Local – actions that can be implemented locally, e.g. at the neighborhood, city or county scale
- Regional – actions that can be implemented regionally, for example by a regional asset manager
- State – actions that can be implemented state-wide, for example by a state agency such as Caltrans or California Office of Emergency Services
- National – actions that can be implemented by a Federal agency or a national organization. These are most likely going to be: providing funding, incentives, technical assistance, or national policy.

## Supplies

1. Prepare an introductory presentation for the exercise. The presentation should include:

- A summary of previous project steps and findings,
- The goal(s) for the exercise.
- A step-by-step example that walks all participants through the process of building an action pathway to address an issue; and
- A quick summary of the key issue that will be addressed, and its direct and indirect consequences.

2. Participant guide (see example, under Example Materials and Outcomes, below) that includes:

- The purpose of the exercise:  
*Learn about how the sequence and scale at which adaptation actions are implemented can result in various trade-offs, levels of resilience and direct and indirect consequences.*
- Resilience goal(s) being addressed in the exercise
- Issue being addressed in the exercise
- Possible adaptation actions
- Key outcomes of addressing the issue, including unintended or secondary consequences.

3. Print, in large font size, the resilience goal(s), key issue, adaptation actions and key outcomes onto separate cards. Each small group will need a complete set of these cards. At each group's table, participants will physically move the cards around to organize them into action pathways that lead from the issue to outcomes.

4. Extra blank cards, post-it notes in different colors (to represent different geographic scales), markers, a camera.

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## 2. Do

### 1<sup>st</sup>

Do the introductory presentation for the entire group to provide context and background information on the exercise. Give participants opportunities to ask questions throughout.

### 2<sup>nd</sup>

Divide into smaller groups (5-8 people) each with a project team leader/facilitator, a set of cards for the exercise and other materials as described under Supplies above. If they have not been pre-assigned to groups, encourage participants from the same organization to join different groups.

Hand out the participant guide (described under Supplies above, also refer to Example Materials and Outcomes, below) and reiterate the goal for the exercise as well as the key issue that will be addressed.

Explain that for this exercise the way to measure success in achieving the resilience goal is to consider how and if relevant outcomes are reached. Review the draft outcomes that were developed by the project team and revise as necessary. As participants move through the exercise they will evaluate if the sequence, scale and type of action selected can achieve these outcomes, or different outcomes. This will then lead back to a discussion on how close or far are they from the resilience goal(s).

### 3<sup>rd</sup>

Review the adaptation actions that the group will be using to build an action pathway, and the geographic scales at which the actions can be implemented. Explain that the group will start with these actions, and if there are other types of actions or scales of implementation that participants want to add in as they move through the exercise they can.

### 4<sup>th</sup>

Lead the group through placing the actions in different order and with different geographic scales of implementation identified. To get them started, encourage them to simply select one action as a starting point and build out from there. Be sure to document the geographic scales at which they intend the actions to be implemented with the different colored post-it notes.

Along the way ask them to consider:

- Are there other actions on the table that would need to happen before we could implement the selected one? What could follow this action?
- Are we getting to the relevant and desired outcomes? Are we getting to a different outcome? Are

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there unintended consequences associated with the type of action, or scale or sequence of its implementation?

- What outcomes would be achieved if we changed the order of the actions? If we changed the geographic scale of implementation?
- How close/far from our resilience goal(s) are we?

## 5<sup>th</sup>

Complete the first run of the exercise and build an action pathway before starting to rewrite or revise the actions, outcomes and goals. Remind them that this is about exploring how different pathways led to different outcomes, and the goal of the exercise is not to achieve consensus. The different pathways can be “memorialized” by writing them down or capturing with a photo. After the first run through the exercise, the group can begin to rearrange the action sequences and scales, add new actions and revise existing actions. They should discuss the differences among the pathways, including the effectiveness of each at achieving resilience goals and desirable outcomes, as well as the unintended or secondary consequences are for each pathway.

# 3. Follow-up

In any follow up associated with this exercise, it is important to take advantage of the improved awareness and understanding of the project participants with the components of an adaptation response and as well as implementation considerations. At a minimum, the project team should summarize the exercise discussions and action pathways, and share a high-level summary with stakeholders in the meeting notes. Depending on who participated in the exercise, working group members may want to follow this exercise by presenting project outcomes to decision makers (e.g., to a city council, board or association), or sharing and discussing profile sheets with colleagues.

Additionally, any relevant feedback and new information about the adaptation actions and implementation options that come out of the exercise discussions should be incorporated into the project outcomes.

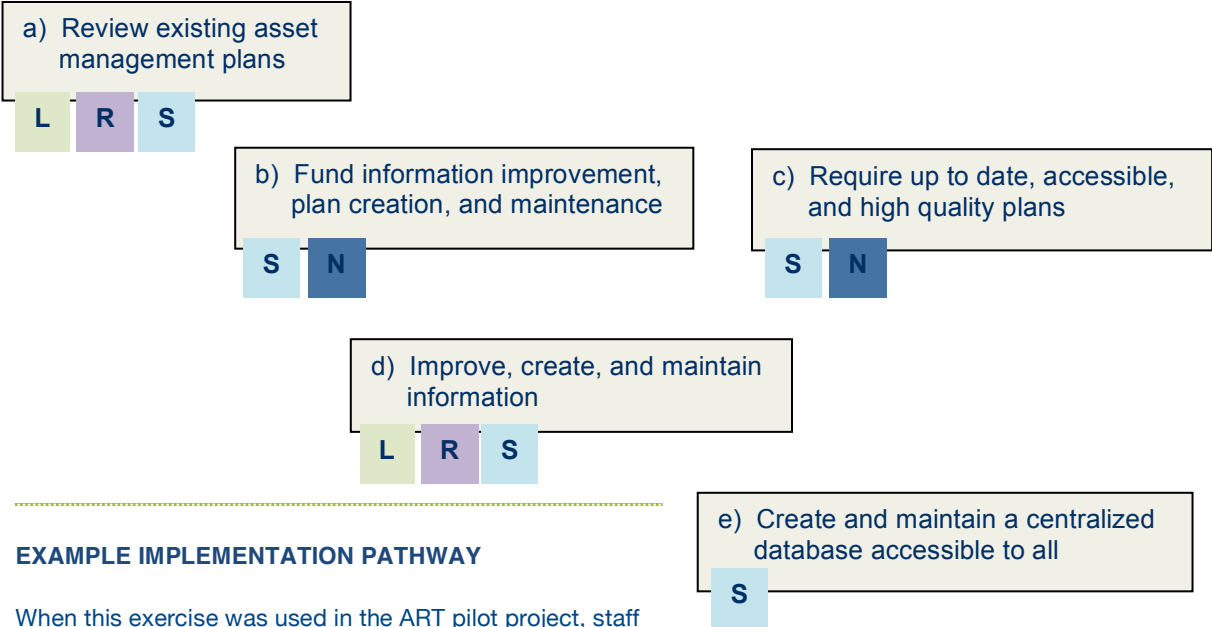
# Example Materials & Outcomes

## Action Pathway

The information vulnerability for transportation (below) was used to demonstrate how outcomes differ depending on the sequence and scale of the actions taken, even if they are essentially the same actions. For example, taking action at the state level only would result in a database of information for state-owned infrastructure, but would not include the local streets and roads that serve the state-owned infrastructure and the communities and economies in the region.

**Resilience Goal:** Ensure that transportation infrastructure is resilient so day-to-day community and economic functions are not disrupted and the region is prepared to respond and recover from emergencies.

**Vulnerability:** There is a lack of detailed, easily accessible, and well-coordinated transportation infrastructure information, which is necessary for assessing vulnerability and preparedness.



**EXAMPLE IMPLEMENTATION PATHWAY**

When this exercise was used in the ART pilot project, staff provided the example action pathway (shown here) in the introductory presentation. The boxes labeled a through e are the actions selected to respond to the vulnerability. The colored squares reflect the geographic scales at which the actions could be implemented. L= Local; R = Regional (San Francisco Bay Area); S= State; N= National.

e) Create and maintain a centralized database accessible to all  
S

- Key Outcomes:**
- 1) Regional transportation assessment
  - 2) Identification of key vulnerabilities and risks
  - 3) Prioritized actions
  - 4) Resources to implement actions

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# Participant Guide

*The following example was used in the ART pilot project to aid development of adaptation responses for a key issue that was identified in the project assessment. The Adaptation in Action exercise allowed the project team to teach participants - who included elected officials, working group members and other stakeholders – about the parts of an adaptation response and the importance of scale and sequence in implementing actions.*

## Resilience Goal:

Certain land uses, such as homes and hospitals, should be sited and designed to protect public health and safety.

## Vulnerability:

Certain types of land uses are particularly difficult to protect, evacuate, or rebuild. Most land use plans, policies and practices do not consider sea level rise or storm events. Without significant changes, future growth in the region could put even more people at risk.

## Adaptation Actions:

- Develop and implement a community outreach process to educate a broad audience on the costs and benefits of reducing risks through design versus avoiding risks through siting
- Develop financial mechanisms to protect, make resilient, or locate certain types of land uses in areas not at risk
- Integrate public and private sector expertise to develop siting and design specifications that ensure certain types of land uses are protected, resilient, or not at risk
- Prioritize the assessment of certain types of land uses in the region and the development of adaptation responses to protect public health and safety
- Review existing land use plans, policies, and practices to determine if they consider the vulnerable nature of certain types of land uses
- Update plans and policies to require that certain types of land uses are protected, resilient, or not located in areas at risk
- Use best available data, science and information to evaluate the equity and economic consequences of siting certain types of land uses (schools, hospitals, childcare facilities, animal shelters, and residential development) in areas at risk

## Key Outcomes of addressing this vulnerability:

- A suite of policy, design and siting options for certain types of land uses that will reduce the risk to public health and safety from extreme storms.
- A stronger understanding of the economic and social equity consequences of the policy, design and siting options available to address this issue.
- Informed decision-makers, land owners, developers and community members that understand the trade-offs associated with reducing risks through design versus avoiding risks through siting.