Integrated Climate Adaptation and Resiliency Program

Resilience Metrics Work Group Meeting

JANUARY 20, 2021
10:00 AM – 12:00 PM (PDT)
Agenda

Item 1 | Welcome and Roll Call

Item 2 | Discussion on Social, Natural and Built Resilience

Item 3 | General Public Comment

Item 4 | Wrap Up and Meeting Adjourned
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Resilience Metrics

**Indicators and metrics to measure CA’s progress towards reducing risk and increasing resilience**

Several Concurrent Processes:

- ICARP TAC Work Group
- IRWG Work Group
- State Adaptation Strategy
- Coordinate w/OEHHA Indicators
# Resilience Metrics Timeline

<table>
<thead>
<tr>
<th>Winter WG</th>
<th>Identify Purpose &amp; Initial Indicators</th>
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<tr>
<td>March TAC</td>
<td>Discuss Purpose &amp; Indicators</td>
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<tr>
<td>Spring WG</td>
<td>Refine Indicators &amp; Purpose</td>
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<td>June TAC</td>
<td>Approve Purpose, Indicators, and Metrics for Stakeholder Engagement</td>
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<td>Summer WG</td>
<td>Resilience Metrics Stakeholder Engagement</td>
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<tr>
<td>Sep TAC</td>
<td>Adopt Resilience Purpose, Indicators and Metrics</td>
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Foundational Definitions

**Resilience** is the capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience.
Foundational Definitions

**Climate vulnerability** describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts.

**Vulnerable communities** experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, sexual orientation and identification, national origin, and income inequality.
Indicators & Metrics Definitions

**Indicators** refer to a characteristic used to describe something. An indicator can consist of a process, or a condition.

**Metrics** - Measuring an Indicator implies the need for a measurement ("metric") and then a further need to create or utilize a dataset to monitor that indicator through metrics.

- Outcome-based metrics represent a specific, observable and measurable indicator of an outcome.
- Output-based metrics measure the inputs to a given system and may be used to share progress on an outcome-based metric. These two metrics, taken together, may holistically be thought of as **impacts**.
# Systems Focus

<table>
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<tr>
<th>Climate Impact</th>
<th>Risk</th>
<th>Sensitivity</th>
<th>Adaptive Capacity</th>
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<tbody>
<tr>
<td>Human and social system</td>
<td>Climate vulnerability describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts.</td>
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<tr>
<td>Natural systems</td>
<td>Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts.</td>
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<tr>
<td>Built systems</td>
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ICARP Principles

**Resilient Natural Systems:** “Natural systems adjust and maintain functioning ecosystems in the face of change."

**Resilient Built Systems:** "Infrastructure and built systems withstand changing conditions and shocks, including changes in climate, while continuing to provide essential services."

**Resilient Social Systems:** "All people and communities respond to changing average conditions, shocks, and stresses in a manner that minimizes risks to public health, safety, and economic disruption and maximizes equity and protection of the most vulnerable."
Resilience Metrics Survey

1. Do you use climate resilience metrics in your work?
   a. Why do you measure climate resilience?
   b. Please share your indicators and metrics

2. Have you come across climate resilience metrics from other organizations that you think could be useful to your work?
   a. Please provide examples of climate resilience metrics that you think are worth sharing.

3. What do you think the state should measure to demonstrate its progress towards achieving climate resilience?
We will build on existing ICARP work...
...& learn from others
Time to dig in!
Resilient Built Systems

"Infrastructure and built systems withstand changing conditions and shocks, including changes in climate, while continuing to provide essential services."

- Why do we want to measure resilience in built systems?
- How would we know if California has resilient built systems?
- Who’s already measuring built system resilience?
Resilient Natural Systems:

“Natural systems adjust and maintain functioning ecosystems in the face of change.”

- Why do we want to measure resilience in natural systems?
- How would we know if California has resilient natural systems?
- Who’s already measuring natural system resilience?
Resilient Social Systems:

“All people and communities respond to changing average conditions, shocks, and stresses in a manner that minimizes risks to public health, safety, and economic disruption and maximizes equity and protection of the most vulnerable.”

- Why do we want to measure resilience in social systems?
- How would we know if California has resilient social systems?
- Who’s already measuring social system resilience?
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Thank you!

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