



OREGON DEPARTMENT OF FORESTRY  
CLIMATE CHANGE AND CARBON PLAN

# Welcome

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Today we will be providing information on the draft Climate Change and Carbon Plan.

Opening remarks from Board of Forestry Chair Jim Kelly

Please use the Chat function to ask questions.

We will have time for questions on process and engagement at the end.

More information and the draft plan are available at:

[www.oregon.gov/odf/forestbenefits/Pages/climate-change.aspx](http://www.oregon.gov/odf/forestbenefits/Pages/climate-change.aspx)

# Opening remarks from Chair Kelly

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# History of how we arrived here

ODF has been engaged with global warming and climate change for three decades:

## Milestones in ODF Climate Change Work

<b>1990</b>
<i>Oregon Task Force on Global Warming Report</i>
<b>1997</b>
<b>The Climate Trust</b> was founded
<b>1999</b>
<b>Forest Resource Trust</b> established

<b>2001</b>
<b>House Bill 2200</b> is passed
<b>2003</b>
2003 Forestry Program for Oregon
<b>2005</b>
<b>Forest Biomass Working Group</b>
<b>2007</b>
Establishment of the Oregon Global Warming Commission
<b>2008</b>
The <b>Department of Forestry</b> hosts a meeting at request of the Global Warming Commission

<b>2010</b>
The <b>State of Oregon</b> issues the <i>Climate Change Adaptation Framework</i> .
<b>2011</b>
2011 <i>Forestry Program for Oregon</i>
<b>2013</b>
The <b>Board of Forestry</b> approves the Climate Change section of work plan.
<b>2015</b>
The Oregon <b>Board of Forestry</b> adopts climate change recommendations
<b>2019</b>
The Oregon <b>Department of Forestry</b> completes the Forest Ecosystem Carbon Report

<b>2020</b>
The Oregon <b>Department of Forestry</b> provides report to the Governor's office in response to E.O. 20-04. Begins work on climate change plan and revision of BOF climate change goal in FPFO.

# History of how we arrived here

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## Brief legislative efforts over time:

1997: HB 3283 regulates carbon dioxide emissions; paves way for The Climate Trust

2001: HB 2200 establishes carbon offset statutes in forestry, includes sequestration as an environmental service

2007: HB 3543 establishes the Oregon Global Warming Commission and Oregon Climate Change Research Institute

# History of how we arrived here

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## Recent legislation

- 2019: HB 2020 provided a cap and invest mechanism across state government to reduce Oregon's GHG emissions and utilize natural climate solutions as an alternative compliance mechanism. Does not make it out of session.
- 2020: HB 1530, much like the previous sessions HB 2020, lays out a program to reduce emissions and increase sequestration. Does not make it out of session.

# History of how we arrived here

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In March of 2020, Governor Brown signs Executive Order 20-04.

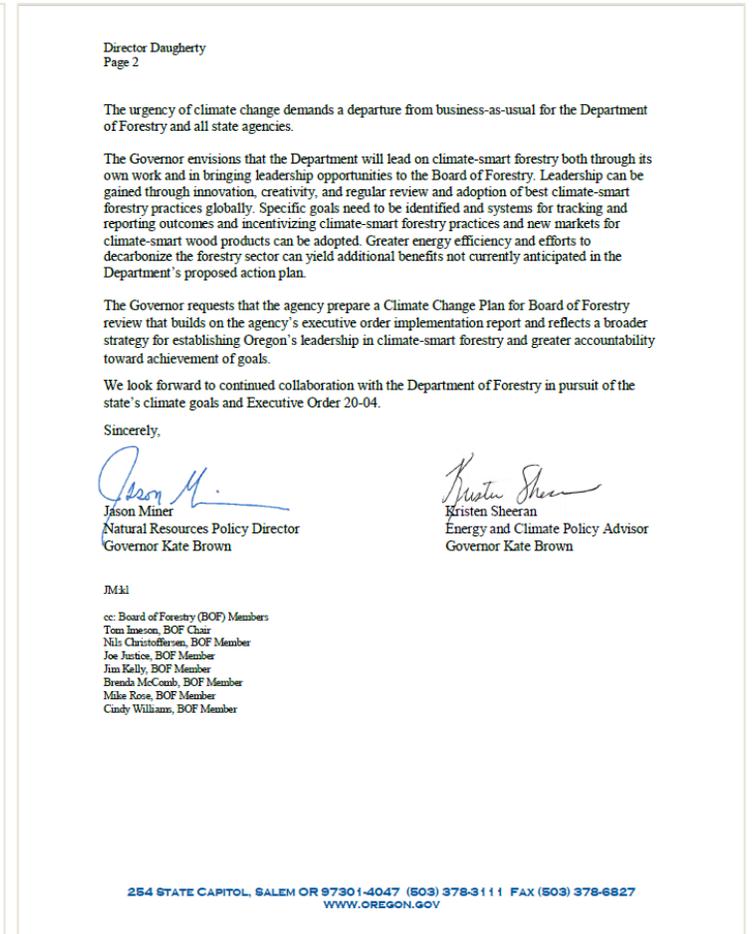
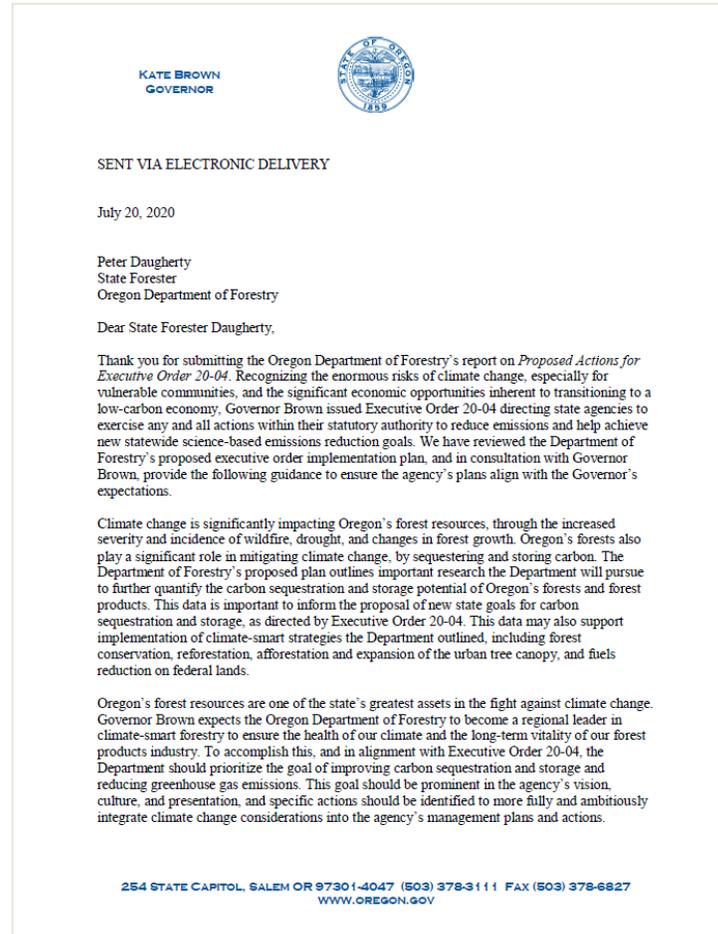
Executive Order 20-04 tasked ODF to put climate change and its impacts front and center in its planning and operations.

Outlines many requirements for state agencies including reports due in May 2020 including the current and anticipated actions within the Department's statutory authorities.

# History of how we arrived here

Following the May 2020 report, the Governor's office requested that ODF draft a climate change plan.

This will embrace climate-smart forestry and place Oregon forestry as a leader in the region related to addressing climate change.



# Tangential Efforts at Different Scales

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With the shift in administrations at the federal level, there has been a series of renewed efforts nationally.

President Biden signed Executive Order 14008 Tackling the Climate Crisis at Home and Abroad January 27<sup>th</sup>, 2021.

Emphasizes the role of agriculture and forestry in climate mitigation.

Centers climate-smart agriculture and forestry (CSAF) in the USDA's work.

# Current ODF Policy

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The Forestry Program for Oregon (FPFO) is not a statute or rule, it is a document and process that provides a coherent foundation for establishing the Board's priorities, policy deliberation, and guidance to Department initiatives and planning.

## Guides Policy

*"...the FPFO provides a clear, quantifiable picture of what sustainable forest management of all of the state's public and private forests should look like. It also provides the basis for future policy work..." (2011 FPFO)*

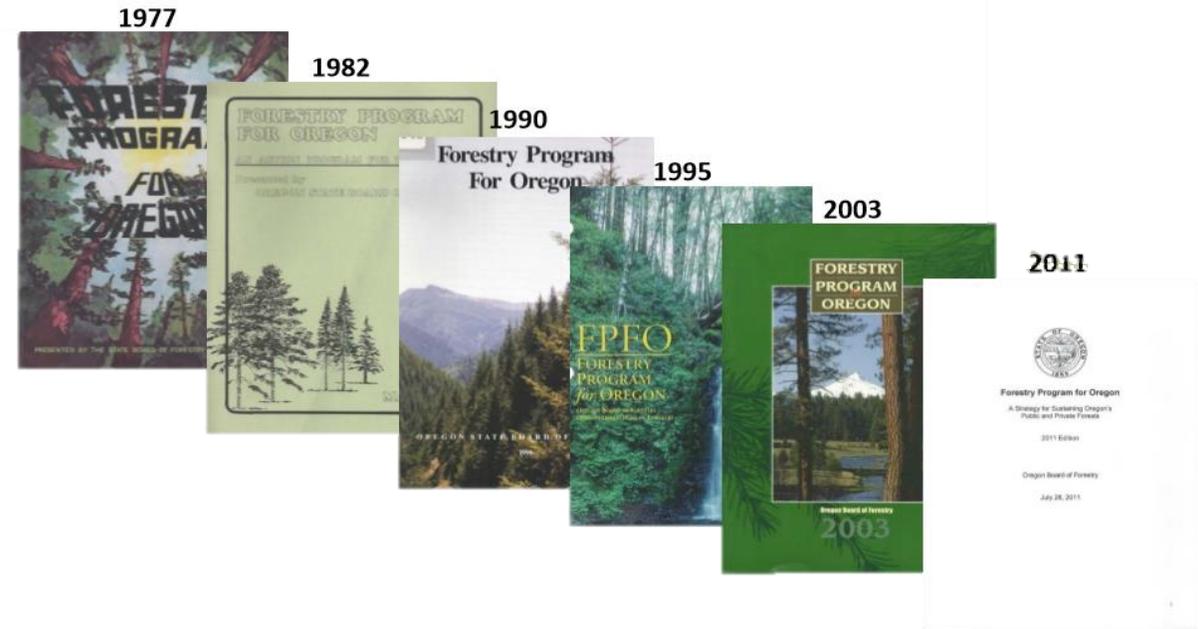
## Guides Planning

*"...this Forestry Program for Oregon is not an end product. It is the foundation for discussion and planning over the next eight years. The Board hopes to show a clear connection between its goals and objectives, Board Work Plans and meeting agendas, Department of Forestry programs, and the policies of other natural resource agencies with responsibilities that affect forestlands. ." (2011 FPFO)*

# Current ODF Policy

The Forestry Program for Oregon describes the Board's mission, values, vision, goals, objectives, and indicators of sustainable forest management.

- Mission establishes the purpose of the Board
- Values identify guiding forestry philosophies
- Vision describes conditions the Board wants to establish, on a 20-year horizon
- Goals identify what the Board wants to achieve over the next eight years
- Objectives are near term actions to focus efforts
- Indicators serve to reflect change and progress in goal achievement



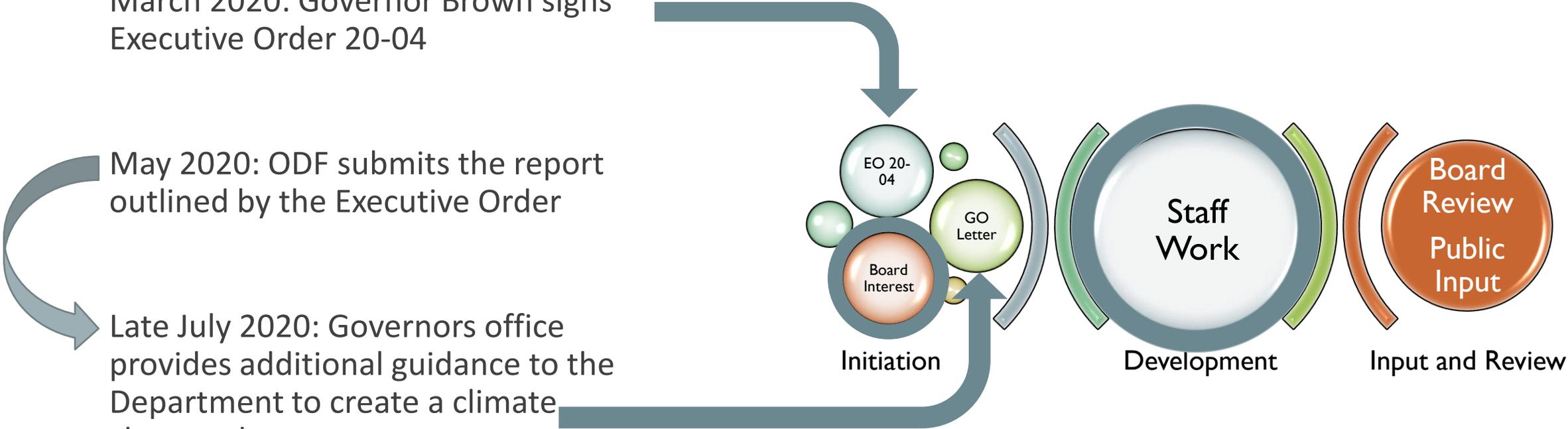
# How we got here

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March 2020: Governor Brown signs Executive Order 20-04

May 2020: ODF submits the report outlined by the Executive Order

Late July 2020: Governors office provides additional guidance to the Department to create a climate change plan.



# Intent of Climate Change and Carbon Plan

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As presented by the Governor's office, the Department's plan will position it as a regional leader in climate-smart forestry.

The plan will build on the highlighted work that the department identified in the May 2020 report to the executives order.

Puts in place expectations and accountability for the Board and the Department in implementing climate-smart forestry and addressing climate change.

# Purpose, Vision, Principles

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## **Purpose:**

- Make Oregon forestry a leader in climate change mitigation and adaptation.
- The department will be a leader in promoting climate-smart forest policies and actions that achieve our vision by operationalizing goals, implementing actions, and measuring progress to achieving climate goals.

# Purpose, Vision, Principles

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## **Vision:**

- The Oregon Board and Department of Forestry provide national leadership in climate-smart and socially equitable forest policies that ensure climate health, resilient forests, a viable forest products industry, and vibrant rural communities.

# Purpose, Vision, Principles

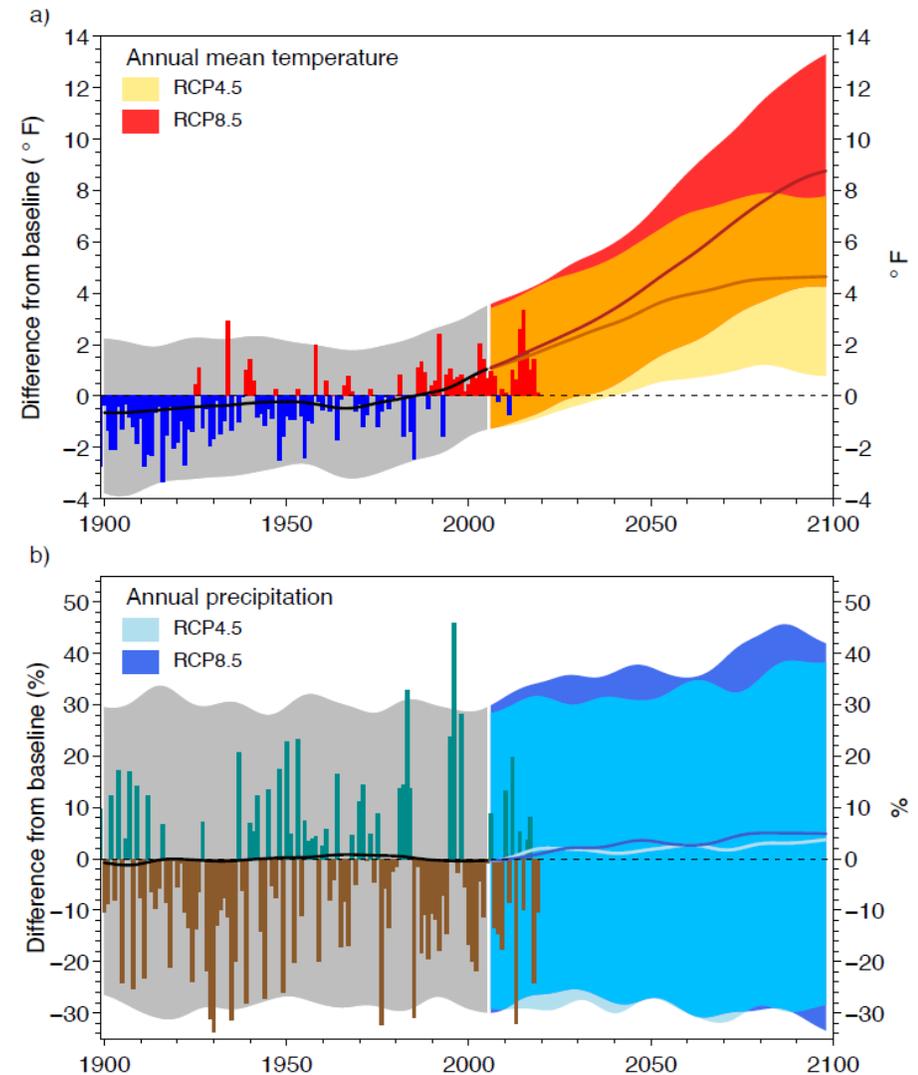
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## Principles:

- Climate change is a serious threat. We have less than a decade to alter behaviors if we want to avoid catastrophic impacts. We must be innovative, creative, and proactive in working towards solutions, not simply react to the results of climate change.
- Black, Indigenous, and People of Color (BIPOC) communities have been and continue to be some of the most climate-impacted communities. Forest policies will be shaped through the lens of social justice and equity. Actions will prioritize benefits to historically and currently underserved communities as they adapt to a changing climate.
- Oregon's forest sector offers opportunities for significant sequestration and storage both in the forest and in harvested wood products. As well as opportunities to promote clean water and air, while preserving forest resilience in the form of flood control, biodiversity, thermal refugia, etc.
- As changing climates affect forests, incorporation of the best available science and practices will be key to adaptive management and planning across ownership type, size, and goals.

# Need for plan

Climate change is threatening Oregon's forest and forest products industry, through increased severity and incidence of wildfire, drought, and greater susceptibility to insects and diseases. Climate change is an existential problem that differentially affects vulnerable populations, including people of color and lower income Oregonians. Without substantial behavior changes and mitigation efforts to limit global warming to less than 1.5°C (2.7°F) by 2030, the region and the world is very likely to experience high levels of ecosystem degradation and species extinctions.



**Figure 1.** Observed, simulated, and projected changes in Oregon's mean annual (a) temperature and (b) precipitation relative to 1970–1999 (baseline) under RCP 4.5 and RCP 8.5 future scenarios. Colored bars are observed values (1900–2019) from the National Centers for Environmental Information. The thicker solid lines are the mean values of simulations from 35 climate models for the 1900–2005 period, which were based on observed climate forcings (black line), and the 2006–2099 period for the two future scenarios (orange [RCP 4.5] and red [RCP 8.5] lines in the top panel, light blue [RCP 4.5] and darker blue [RCP 8.5] lines in the bottom panel). Shading indicates the range in annual temperatures or precipitation from all models. The mean and range were smoothed to emphasize long-term variability. (OCCRI 2021)

# What is Climate-Smart Forestry

For purposes of the Climate Change and Carbon Plan, **climate-smart forestry** is anchored in sustainable forest management and evolved from climate-smart agriculture ideas in the early 2010s.

At its core, climate-smart forestry has three main areas:

- forest **adaptation**,
- climate **mitigation**, and
- the **social dimensions** of community and economy

*Climate-Smart Forestry is sustainable adaptive forest management and governance to protect and enhance the potential of forests to adapt to, and mitigate climate change. The aim is to sustain ecosystem integrity and functions and to ensure the continuous delivery of ecosystem goods and services, while minimising the impact of climate-induced changes on mountain forests on well-being and nature's contribution to people.*

**Adaptation** measures of forests that maintain or improve their ability to grow under current and projected climatic conditions and increase their resistance and resilience. The adaptive capacity to changes in climate and to the timing and size of climate-induced disturbances (e.g., fire, extreme storm events, pests and diseases) can be enhanced by promoting genetic, compositional, structural, and functional diversity at both stand and landscape scales. This includes facilitating natural regeneration and planting of native as well as non-native tree species, genetic variants and individuals that are considered to be adapted to future conditions. Increased connectivity assists the migration of forest species.

**Mitigation** of climate change by forests is a combination of carbon sequestration by trees, carbon storage by forest ecosystems, especially soils, and forest derived products, such as structural timber, and by carbon substitution - directly by replacing fossil fuels with bioenergy and indirectly through use of wood to substitute for higher carbon footprint materials.

The **social dimension** of forestry holds many aspects, from the involvement of stakeholders from local communities, and their conflicts over land use or for the access to skills and technology, to global forest governance challenges. Climate change may jeopardize forest ecosystem functioning and brings social and economic consequences for people, which may modify priorities of ecosystem services at various scales. Assessment for ecosystem services could be a tool making this process more efficient with respect to indicators relevant for governance regime and actors involved.

In summary, **Climate-Smart Forestry** should enable both forests and society to transform, adapt to and mitigate climate-induced changes.

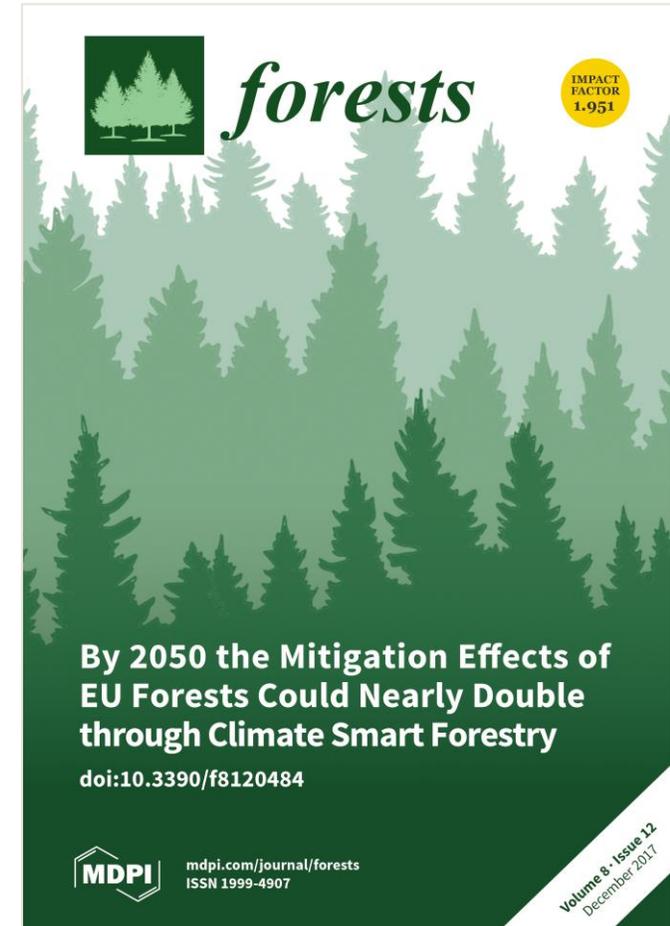
# Forestry Climate Action Goals

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1. Climate-Informed Forestry
2. Fire Response and Fire / Smoke Adapted Communities
3. State Forests Management
4. All Lands Forest Restoration
5. Urban and Community Forests
6. Reforestation and Afforestation
7. Maintain and Conserve Forests
8. Research and Monitoring

# Climate-Informed Forestry

*Goal: Establish a just and equitable transition to climate-informed silviculture and climate-smart forestry that optimizes climate mitigation and adaptation, while maintaining a sustainable flow of wood products to ensure long-term resource benefits and viability of the forest products industry and flow of long-lived forest products.*



# Fire Management, Response and Fire / Smoke Adapted Communities

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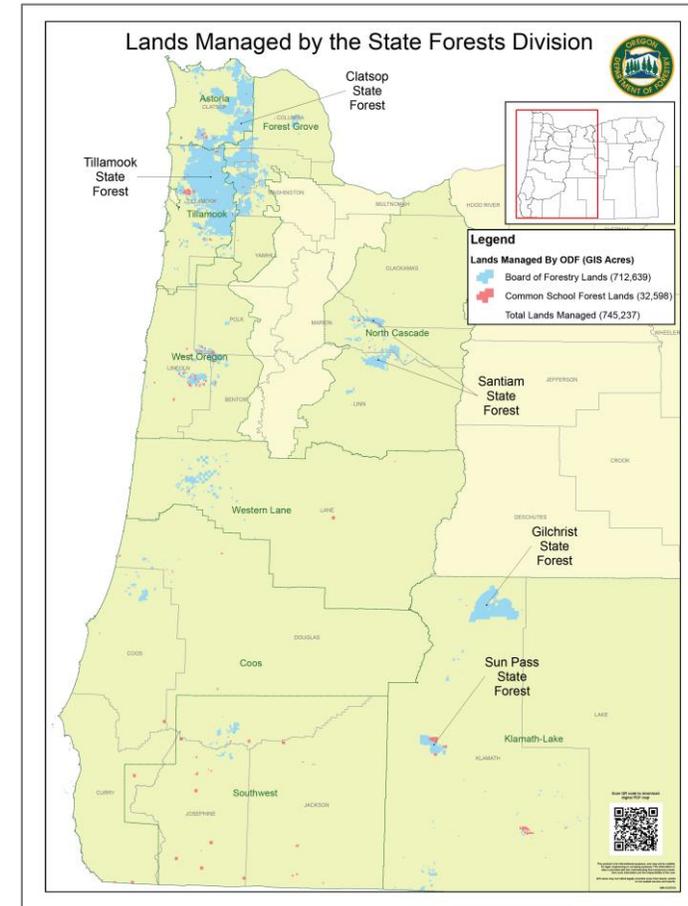
*Goal: Modernize Oregon's complete and coordinated wildfire protection system to respond to the increased severity of wildfire.*

*Promote fire and smoke adapted communities in the wildland-urban interface, to mitigate the impacts of climate-induced increases in wildfire severity.*



# State Forests Management

*Goal: Lead by example and demonstrate climate-smart forest management on State Forests to achieve Greatest Permanent Value.*



# All Lands Forest Restoration

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*Goal: Accelerate the pace, scale, and quality of forest restoration to increase the resilience to increased wildfire severity and incidence. Support implementation of the recommendations of the Governor's Council on Wildfire Response.*



# Urban and Community Forests

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*GOAL: Increase the extent and resilience of urban and community forests to maximize the climate mitigation and health benefits of urban forests canopy.*



# Reforestation and Afforestation

*Goal: Facilitate and encourage the reforestation of areas burned by wildfire and afforestation of low-productivity lands that are understocked or not in forest use.*

## Potential global contribution of response options to mitigation, adaptation, combating desertification and land degradation, and enhancing food security

**Panel B** shows response options that rely on additional land-use change and could have implications across three or more land challenges under different implementation contexts. For each option, the first row (high level implementation) shows a quantitative assessment (as in Panel A) of implications for global implementation at scales delivering CO<sub>2</sub> removals of more than 3 GtCO<sub>2</sub> yr<sup>-1</sup> using the magnitude thresholds shown in Panel A. The red hatched cells indicate an increasing pressure but unquantified impact. For each option, the second row (best practice implementation) shows qualitative estimates of impact if implemented using best practices in appropriately managed landscape systems that allow for efficient and sustainable resource use and supported by appropriate governance mechanisms. In these qualitative assessments, green indicates a positive impact, grey indicates a neutral interaction.

### Reforestation and forest restoration



**High level:** Impacts on adaptation, desertification, land degradation and food security are maximum potential impacts assuming implementation of reforestation and forest restoration (partly overlapping with afforestation) at a scale of 10.1 GtCO<sub>2</sub> yr<sup>-1</sup> removal [6.3.1]. Large-scale afforestation could cause increases in food prices of 80% by 2050, and more general mitigation measures in the AFOLU sector can translate into a rise in undernourishment of 80–300 million people; the impact of reforestation is lower [6.3.5].



**Best practice:** There are co-benefits of reforestation and forest restoration in previously forested areas, assuming small scale deployment using native species and involving local stakeholders to provide a safety net for food security. Examples of sustainable implementation include, but are not limited to, reducing illegal logging and halting illegal forest loss in protected areas, reforesting and restoring forests in degraded and desertified lands [Box6.1C; Table 6.6].

### Afforestation



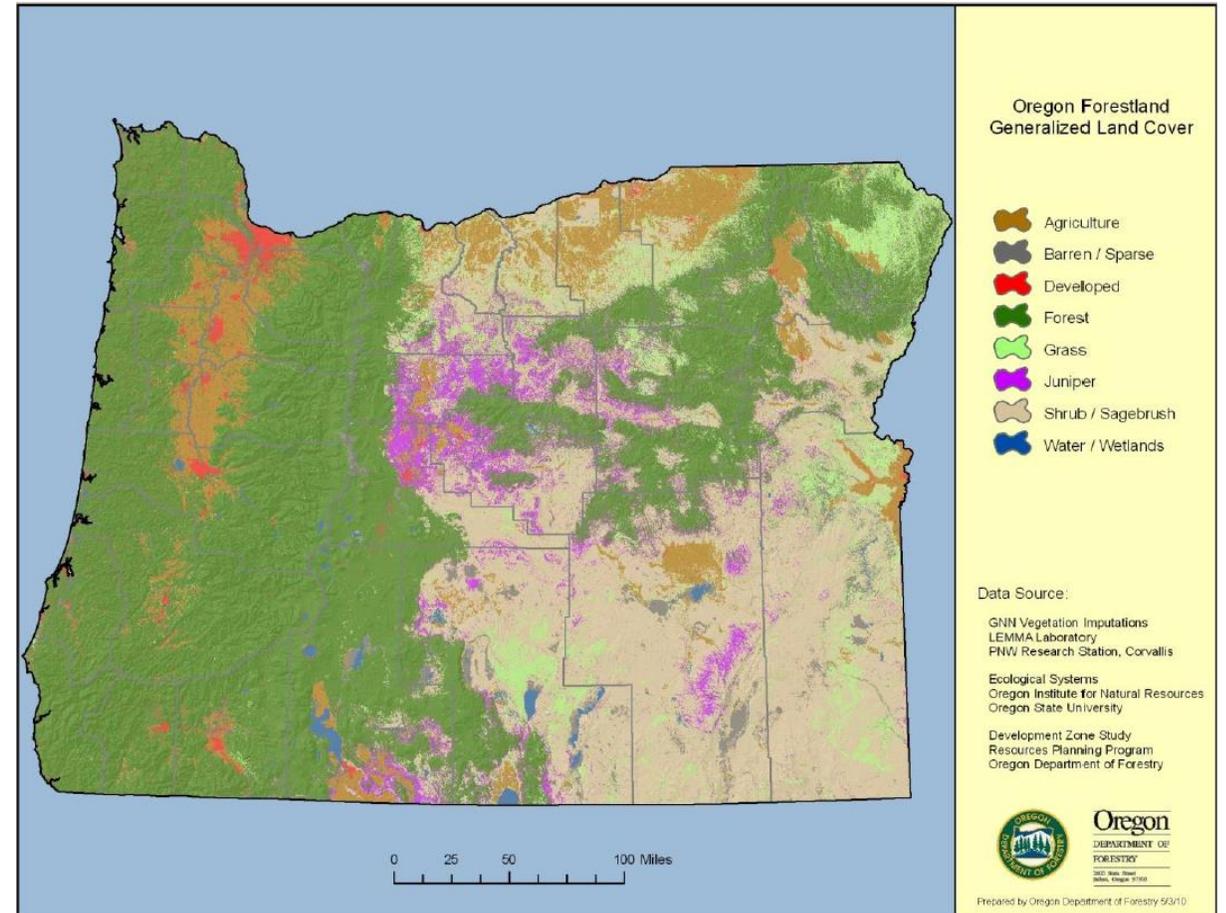
**High level:** Impacts on adaptation, desertification, land degradation and food security are maximum potential impacts assuming implementation of afforestation (partly overlapping with reforestation and forest restoration) at a scale of 8.9 GtCO<sub>2</sub> yr<sup>-1</sup> removal [6.3.1]. Large-scale afforestation could cause increases in food prices of 80% by 2050, and more general mitigation measures in the AFOLU sector can translate into a rise in undernourishment of 80–300 million people [6.3.5].



**Best practice:** Afforestation is used to prevent desertification and to tackle land degradation. Forested land also offers benefits in terms of food supply, especially when forest is established on degraded land, mangroves, and other land that cannot be used for agriculture. For example, food from forests represents a safety-net during times of food and income insecurity [6.3.5].

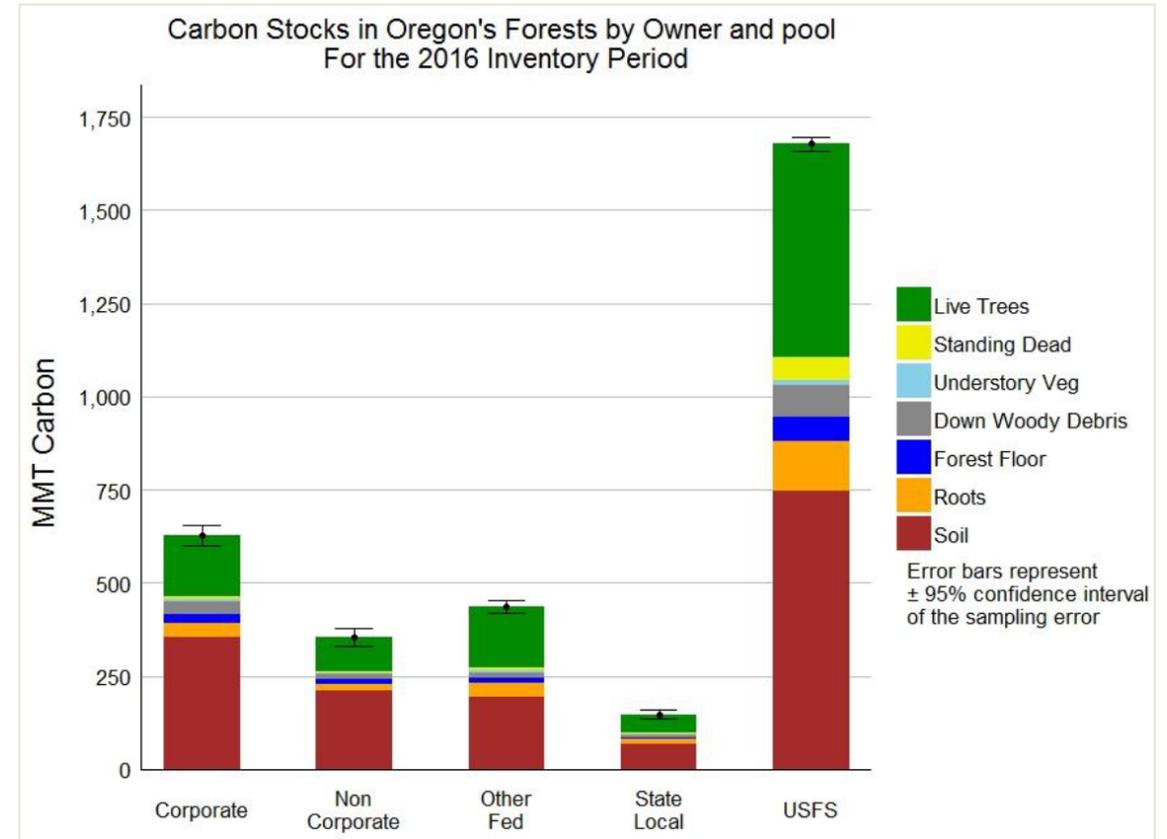
# Maintain and Conserve Forests

*Goal: Support a strong, but flexible, Land Use Planning System as a cornerstone of maintaining Oregon's forests on private lands.*



# Research and Monitoring

*Goal: Maintain a research and monitoring program to track the status and trends of ecological, economic, and social indicators and the effects of climate change and to track progress related to this plan.*



# Supporting actions

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Supporting actions are linked to multiple goals.

Depending on the action, impacts can and will extend to several goals, they are not limited to a one to one goal relationship.

These supporting actions will be incorporated into agency planning, which includes documents and processes like the Forest Management Plan, Implementation Plans, and Annual Operating Plans, among others.

- Many of these other plans and processes lay out in short time segments (e.g., biennium) what the Department's work will be.

# Supporting Actions

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Examples include:

- Incorporating climate change in FPA rule development and revision
- Incentivizing climate-smart forestry
- Providing recognition of climate mitigation and adaptation measures
- Developing an internal carbon pricing process
- Restoration of low/under performing forests (e.g., Swiss needle cast)
- Increase restoration efforts including a prescribed fire program
- Afforestation and reforestation in the municipal and community environment
- Investigate further decarbonization of forest activities and harvest
- Among others

# Next steps:

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Public engagement:

Website will be central to engagement.

- The plan is on the Department's climate change web page. Updates will be posted as available.
- Hope to receive constructive information on what is missing in the plan.
- Public comment form available on the web page.
- Written public comment will be open until the end of June .
- Can always provide comments to the Board of Forestry at their meetings.
- Iterative updates, feedback loop, and information (i.e. a FAQ on common questions, fact sheet on feedback received.).

# Next steps:

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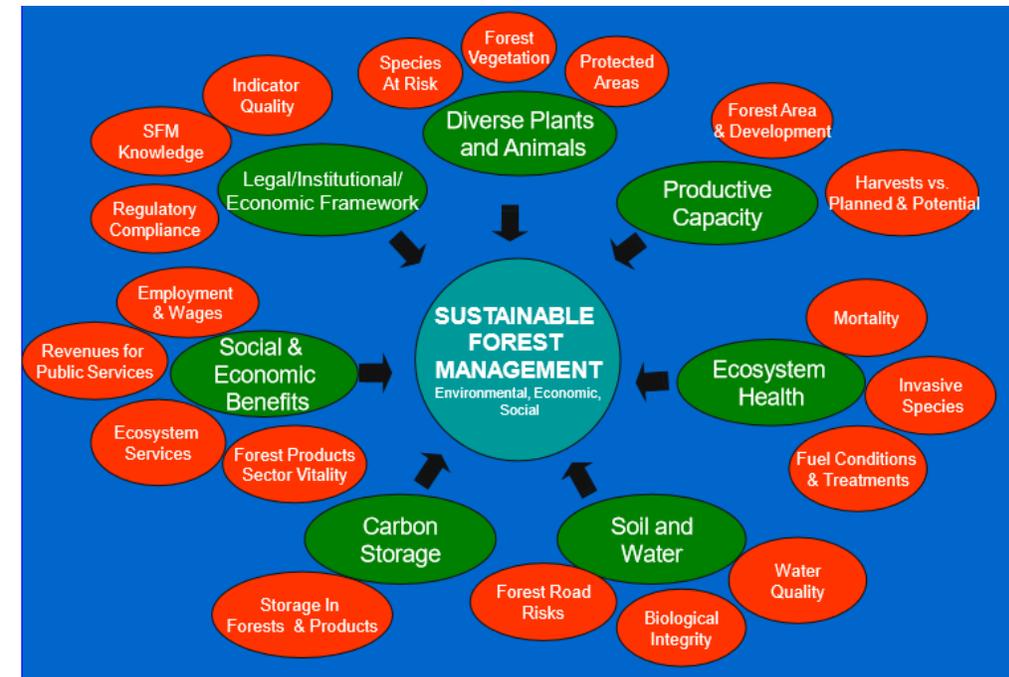
## Timeline:

- Will be working through the feedback process and begin to incorporate the feedback received in July.
- Other engagement will be taking place along with the public comment period including with the Board of Forestry, Tribes, and counties, among others.
- A revised draft will be presented at a pre-decisional workshop, likely in September between Board members and the Department's executive leadership.
- Final editing will follow and a final draft is expected to go to the Board in November.

# Follow-on planning processes

## 2011 Forestry Program for Oregon

- Reflected the 2003 edition using Montreal criteria for sustainable forestry
- Updated mission, vision, and values
- Focus shift from timber supply assessments to keeping forest land in forest use
- Included 19 indicators of sustainable management to measure quantitative and qualitative attributes and monitor trends
- Direction to update the FPFO on 8 year cycles and establish Board work plans to integrate planning into decision making



# Forestry Program for Oregon - Revision

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Revision is a substantial process in terms of time and commitment

- Assessments, public engagement and input, Board discussion and time
- The process has served to harmonize the Board and Department in policy and priority
- The documents serve as a coherent voice regarding Board forest policy and planning

A revision and review of indicators could begin in 2022

- Following Climate Change Carbon Plan
- Begin with consideration of Montreal criteria or alternative framework

# Follow-on planning processes

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## Forest Management Plan

In October of 2020 the Board of Forestry (BOF) gave direction to the State Forests Division to continue the development of a draft Habitat Conservation Plan (HCP) and a companion Forest Management Plan (FMP) for about 640,000 acres of ODF-managed lands west of the Cascades. With the HCP administrative draft entering the NEPA process in March 2021, the State Forests Division is beginning development of the companion FMP and IPs.

FMP process website: [www.oregon.gov/odf/aboutodf/pages/fmp-companion.aspx](http://www.oregon.gov/odf/aboutodf/pages/fmp-companion.aspx)

# Questions and Resources

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**ODF Climate Change Page:** [www.oregon.gov/odf/ForestBenefits/Pages/Climate-Change.aspx](http://www.oregon.gov/odf/ForestBenefits/Pages/Climate-Change.aspx)

**Board of Forestry Page:** [www.oregon.gov/odf/board/Pages/default.aspx](http://www.oregon.gov/odf/board/Pages/default.aspx)

**Governor Brown's Climate Policy Office:** [www.oregon.gov/gov/policy/Pages/energy\\_climatechange.aspx](http://www.oregon.gov/gov/policy/Pages/energy_climatechange.aspx)

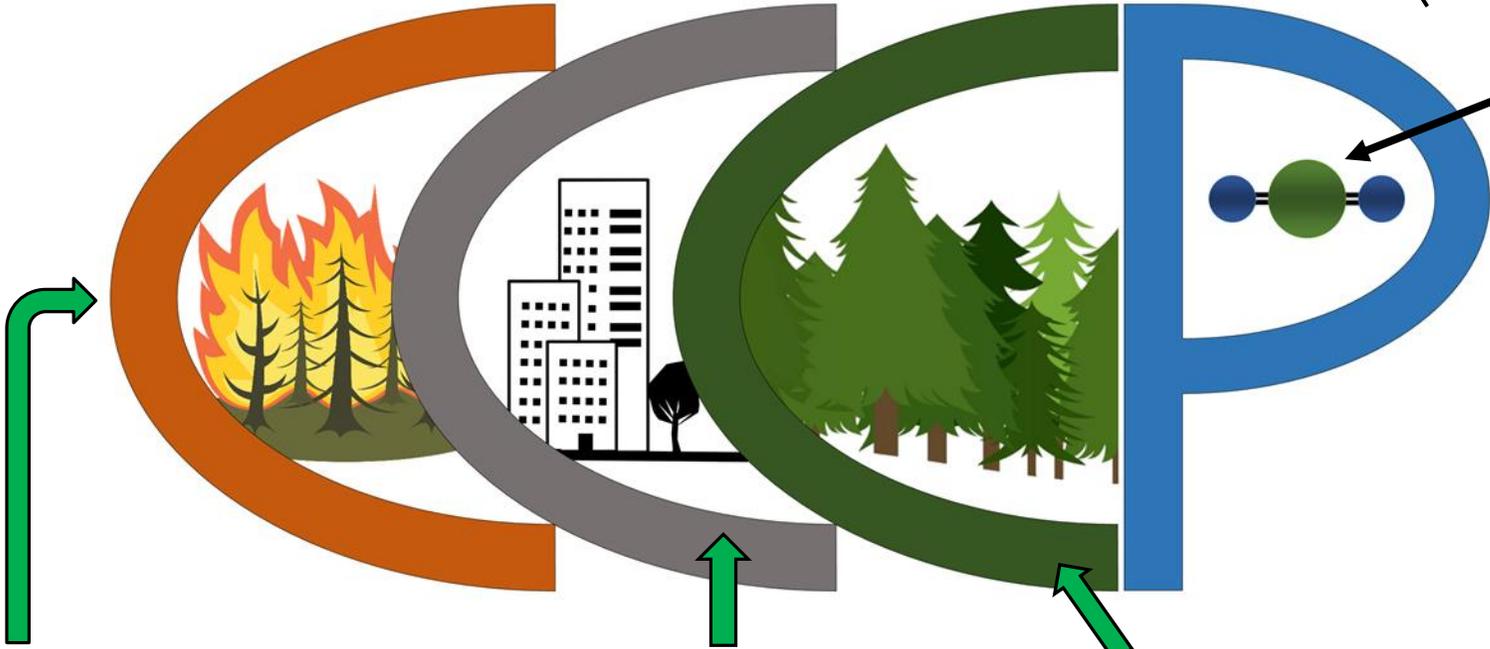
**OGWC website:** [www.keeporegoncool.org/about-the-commission](http://www.keeporegoncool.org/about-the-commission)

Goal is to cool the planet

Hot  
Now

Cool  
Future

Carbon Dioxide



Adaptation: response to the impacts of climate change on Oregon's forests

Social Dimension: Community and economy supported by climate adapted forests

Mitigation: Utilize natural climate solutions to reduce GHG in the atmosphere through sequestration