Characterizing private landowners' fuel reduction activities for coupled systems modeling in Oregon's (USA) ponderosa pine ecoregion

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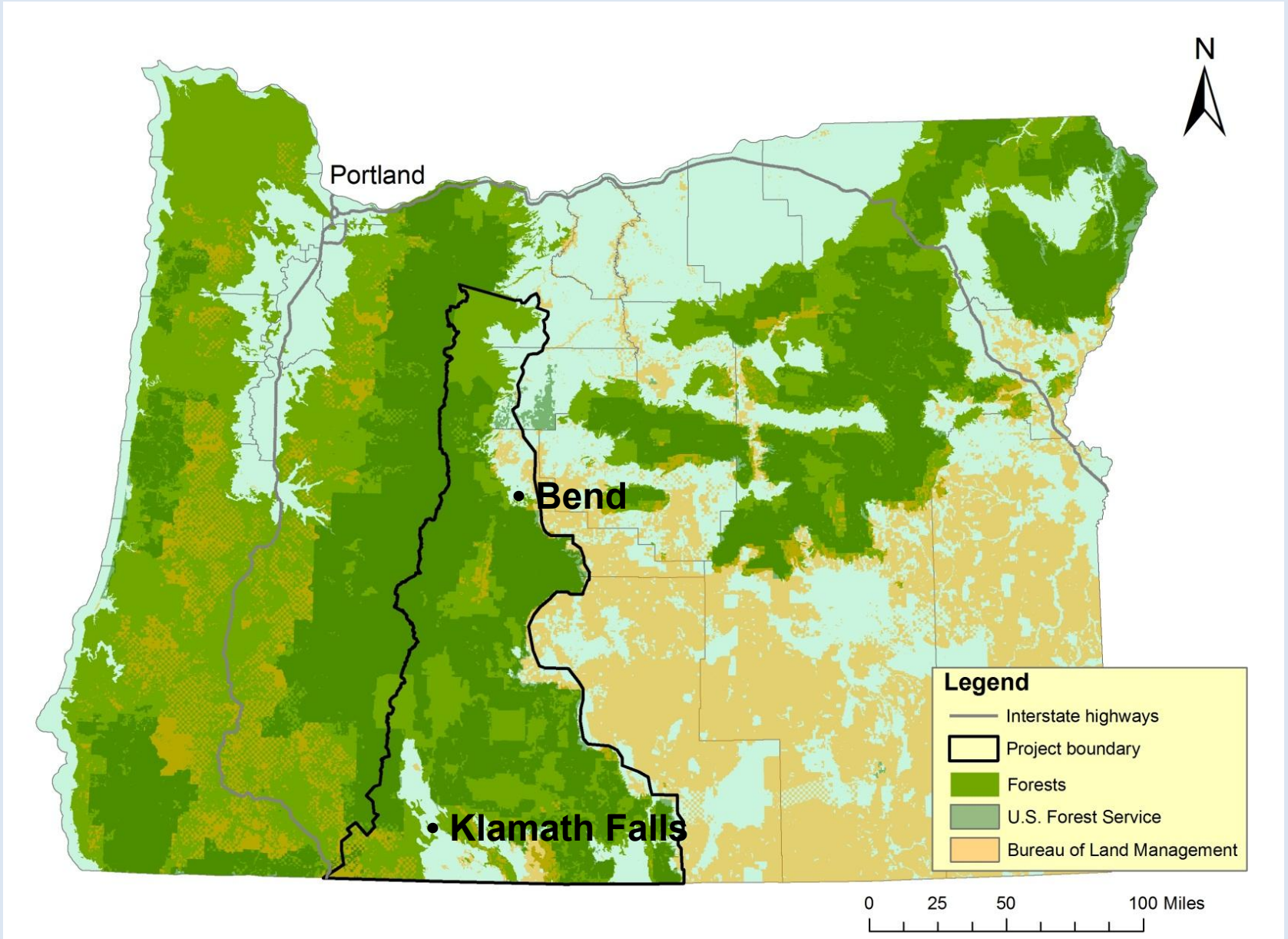
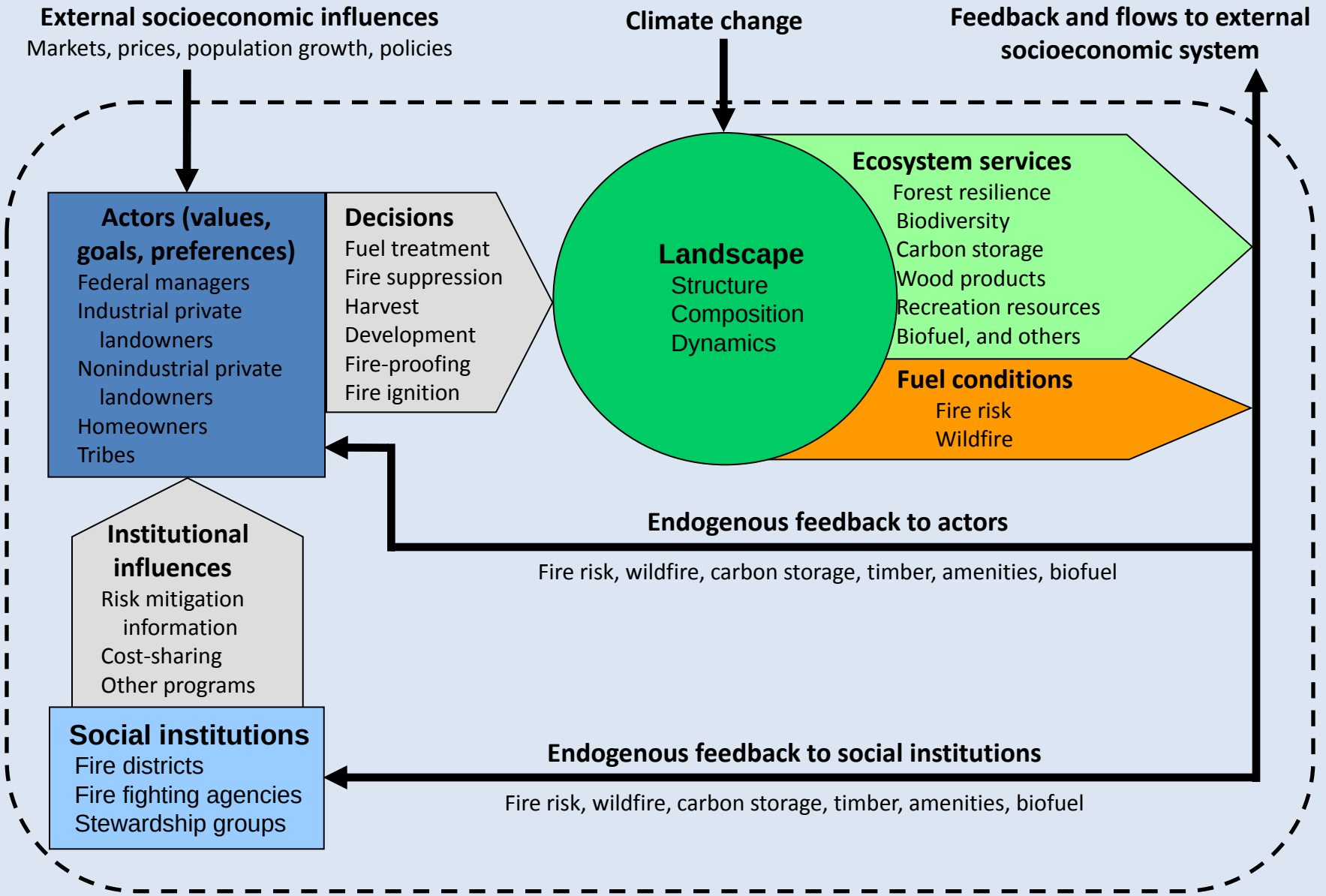
Coupled human-natural system study area

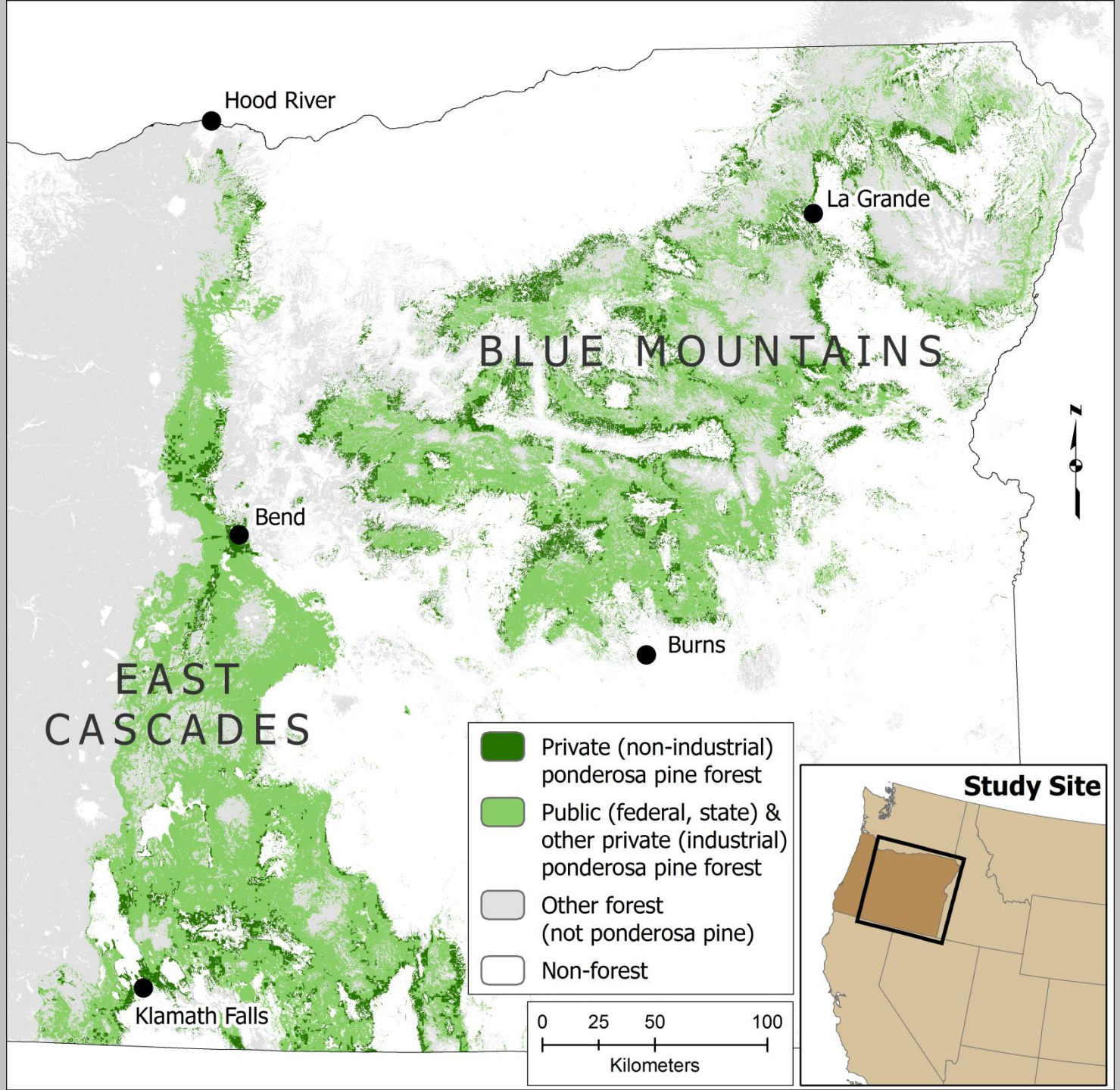


Coupled human-natural system study area

Coupled human-natural fire-prone system




This Job By...
Wildfire
Fuels Reduction
541-598-7393


Hood River
La Grande
BLUE MOUNTAINS
N
Bend
Burns
EAST
CASCADES
Klamath Falls
Private (non-industrial) ponderosa pine forest
Public (federal, state) & other private (industrial) ponderosa pine forest
Other forest (not ponderosa pine)
Non-forest
0 25 50 100
Kilometers
Study Site

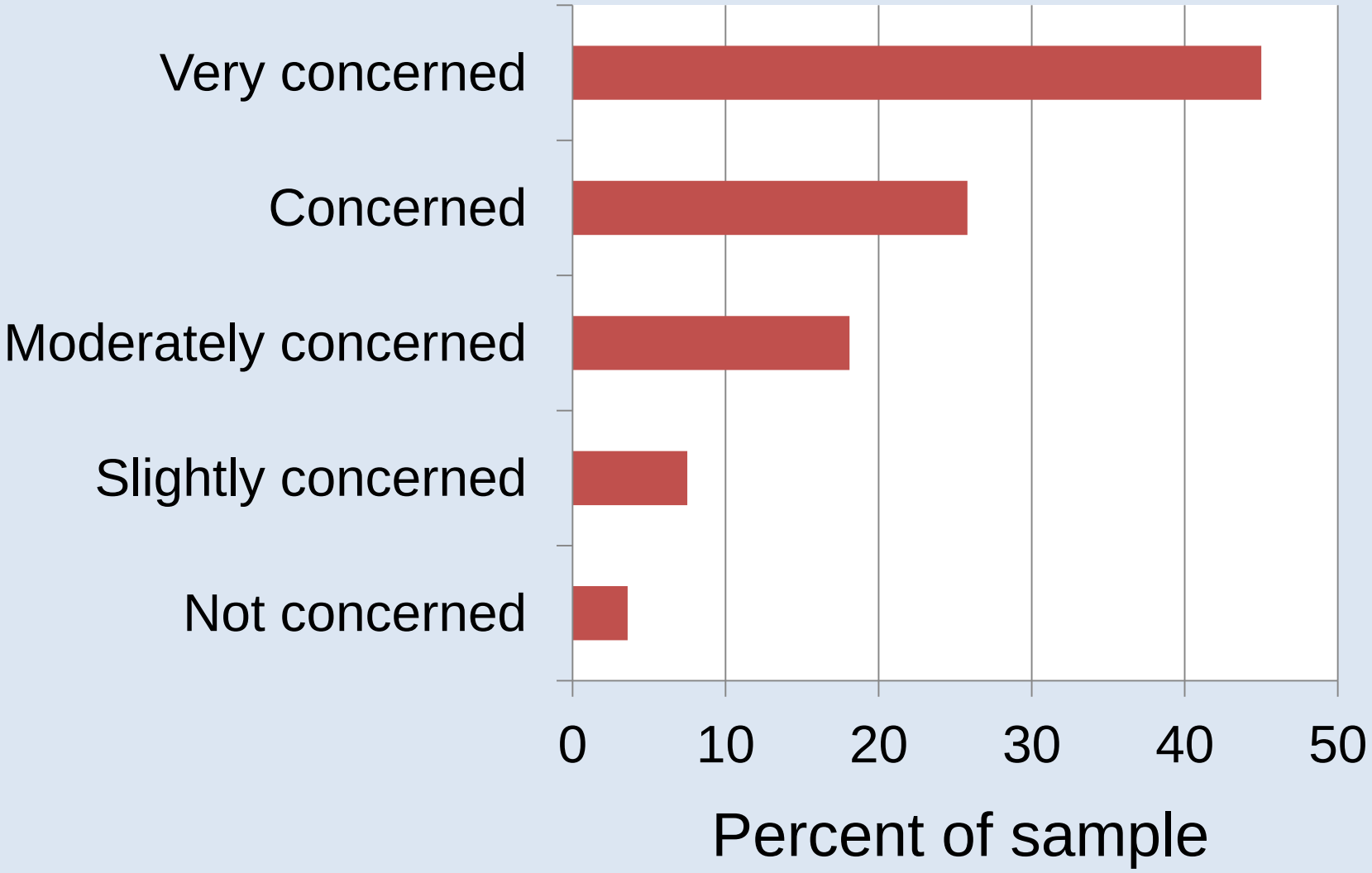
Survey sample

- Conducted in 2008
- Survey sent to 1,244 landowners
- 234 surveys disqualified
- 505 usable surveys returned (50%)
- 360 surveys used in analysis (36%)

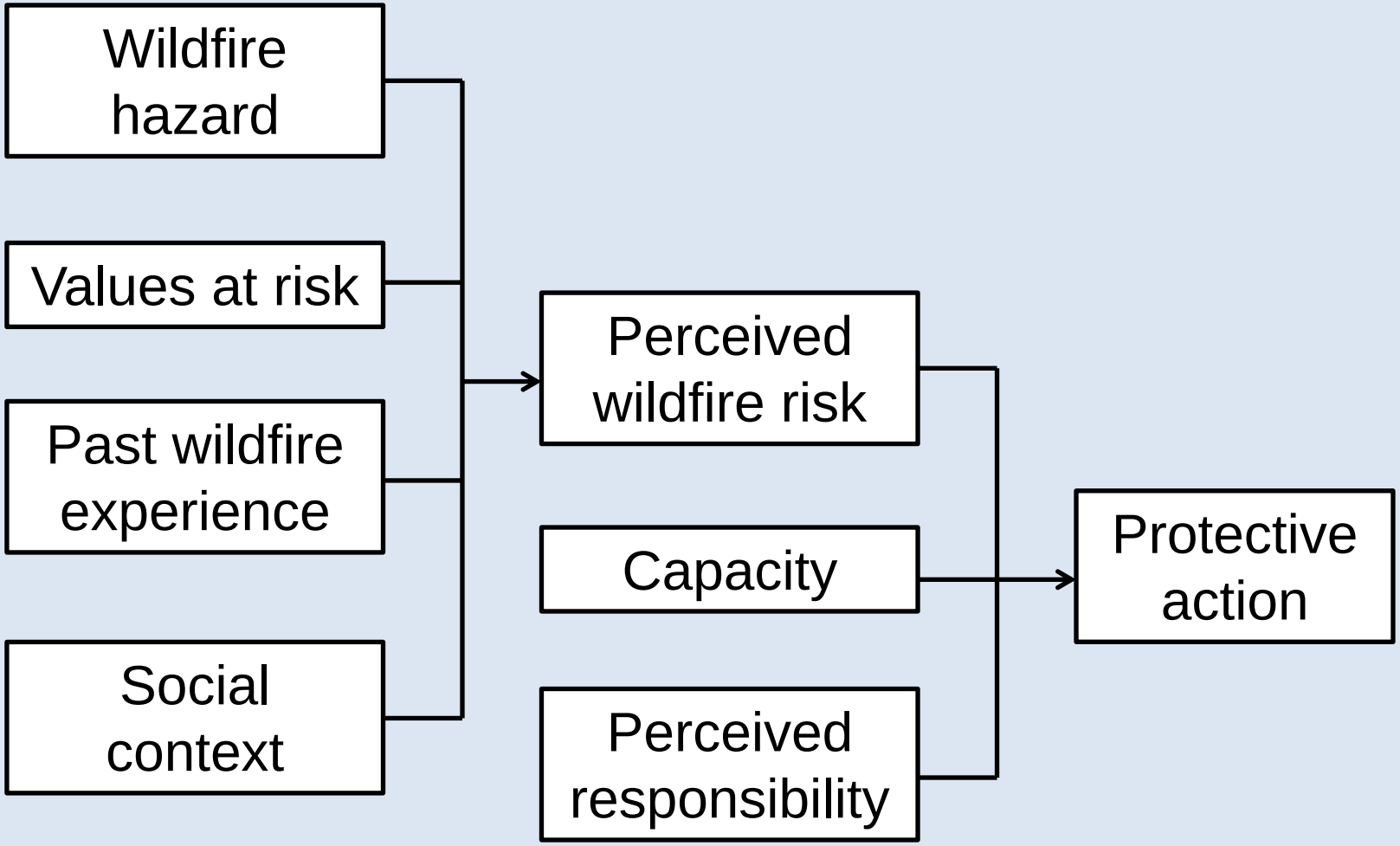
Survey respondent characteristics

Treat for fuel	79%
Resident on parcel	28%
Timber objective	43%
Past fire on parcel	44%
Forestry or fire protection group member	26%
Age	63 years

Perceived wildfire risk



Conceptual framework



Empirical modeling

Perceived wildfire risk = *f* (wildfire hazard,
values at risk,
past wildfire experience
social context);

Treat for fuel = *f* (perceived wildfire risk,
capacity,
perceived responsibility).

Perceived-wildfire-risk model

Factor	Variable	Sign/sig
Wildfire hazard:	Crown fire potential	+++
Values at risk:	Resident on parcel	+
	Timber objective	++
Past experience:	Past fire on parcel	+++
Social context:	Forestry or fire protection group member	+

Treat-for-fuel model

Factor	Variable	Sign/sig
Perceived wildfire risk:	Level wildfire concern	+++
Capacity:	Resident on parcel	+++
	Timber objective	+++
	Forestry or fire protection group member	++
	Age	- - -
	Mill distance	- -

Conclusions

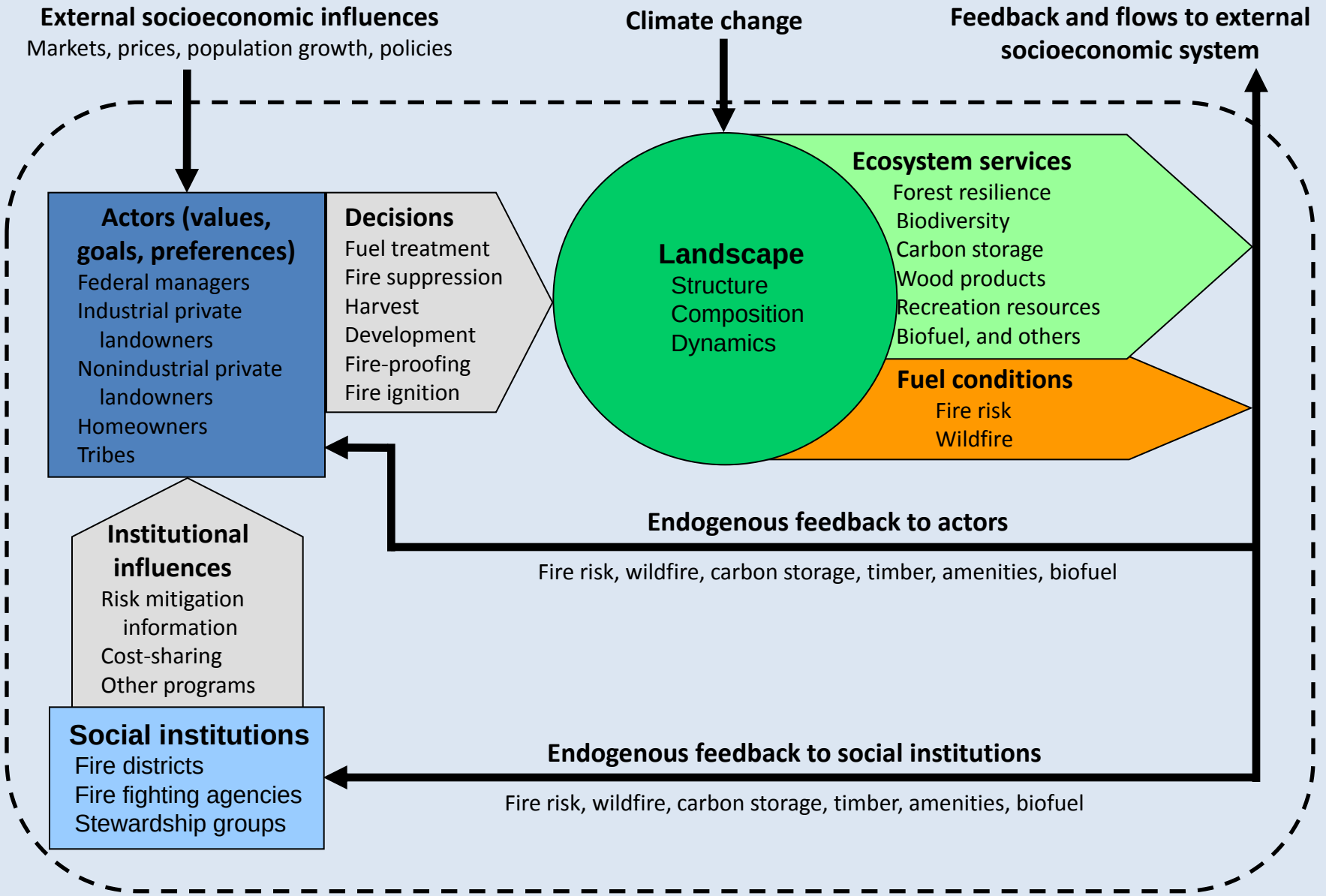
- Landowners' wildfire risk perceptions are shown to be correlated with hazardous fuel conditions predicted by fuel models

- Risk perceptions also are correlated with past wildfire experiences, residency, timber- growing interests, and membership in forestry and fire protection organizations

Conclusions *continued*

- Landowners' propensity to reduce fuel is correlated with level of concern about wildfire
- Fuel treatment activity also is correlated with landowners' capacity to undertake activities
- Policies potentially could increase fuel treatment activity through education to raise awareness of wildfire hazard, and technical assistance to increase capacity to conduct treatments

Coupled human-natural fire-prone system



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