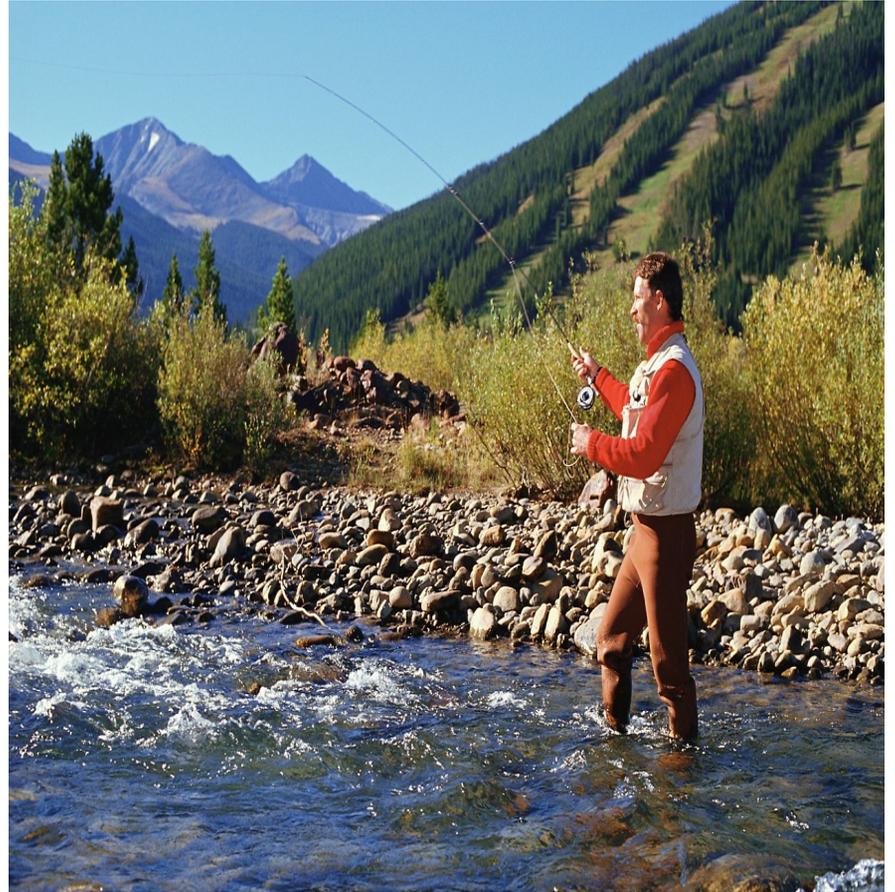


Protection & Restoration Strategies

Guest Presenter:

Harry Reinert, Special
Project Manager,
King County DDES



Two Basic Approaches

- Regulatory
 - Critical Areas
 - Stormwater
 - Endangered Species
- Incentive
 - Conservation easement
 - Public benefit rating system
 - Transfer of development rights



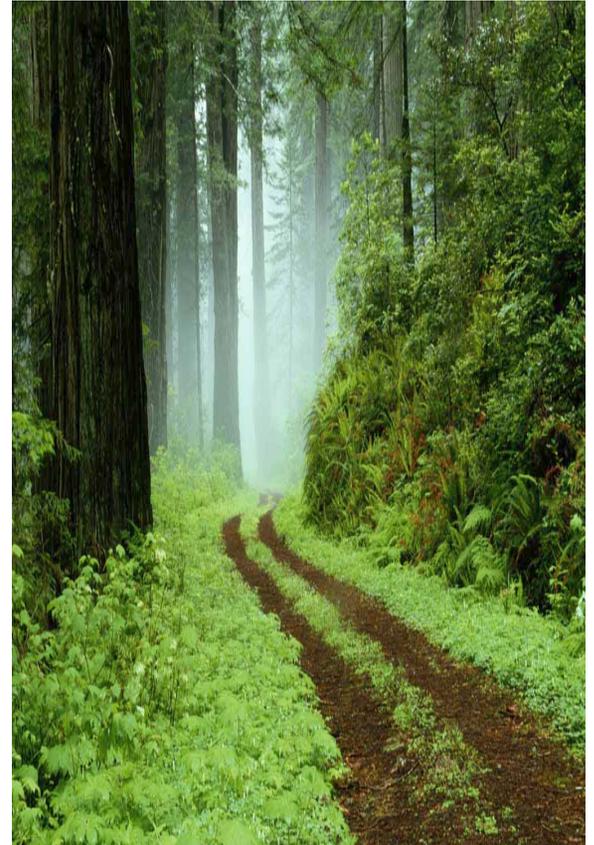
Multiple Layers

- Federal
 - Clean Water Act
 - Endangered Species Act
- State
 - Shoreline Management Act
 - Growth Management Act
 - State Environmental Policy Act
- Local
 - Clearing and grading regulations
 - Zoning



Focus

- Narrow
 - Endangered species act
 - Clean water act
 - Critical areas regulations
- Broad
 - Growth Management Act
 - State Environmental Policy Act
 - Watershed Planning



Purpose of our Tools

- Manage
 - Growth Management Act
 - Shoreline Management Act
- Protect
 - Endangered species act
 - Clean Water Act
- Restore
 - Public benefit rating system
 - Conservation easement

Conclusions

- Multiple regulatory layers create confusion, overlaps, and conflicts.
- Programs often do not look at the ecosystem.
- Incentives and non-regulatory approaches are not well-developed or promoted.
- Monitoring is frequently under-funded.

Conclusions

- No single program can address all of the problems facing Puget Sound.
- Addressing Puget Sound's problems will require a combination of regulatory and non-regulatory approaches.

Question 3: How effective are our management tools?

Guest Presenter:
Gino Lucchetti,
Ecologist
King County



Effectiveness



- What is it?
- Would we know it if we saw it?
- Is anything working?

Definition

Webster's – effective: 1) having the power to effect, 2) operative, 3) efficient, 4) powerful

Wikipedia:

- effectiveness: doing "right" things, i.e. setting right targets to achieve an overall goal (the *effect*)
- efficiency: doing things "right", i.e. in the best and most economical way
- efficacy: getting things done, i.e. meeting immediate targets

“**Effective**” – We mean how scientists typically use the word, i.e., to show a “cause and effect” relationship between an action and a result at a particular scale.

Context, Context, Context!

- Scale – space and time
- Location
- Starting Condition and History
- Science and tools need to recognize and work across natural and human scales



Spatial

Ecological

- Puget Sound
- Watersheds/Basins
- Drift Cell/Reach
- Habitat Unit

Human

- Federal
 - Tribal
- State
- Puget Sound Partnership
- County
- City

Temporal

Ecological

- Geologic and Climatic
- Geomorphology
(Landforms, channels, shorelines)
- Evolutionary -
Speciation and
community
succession
- Life history diversity

Human

- CWA, ESA, GMA,
SMA
- Local Comp Plans
- Regulations
- Programs, Projects

Intended Consequences

- Actions to **prevent change**, e.g., regulations, policies, acquisitions, conservation easements, stewardship and education

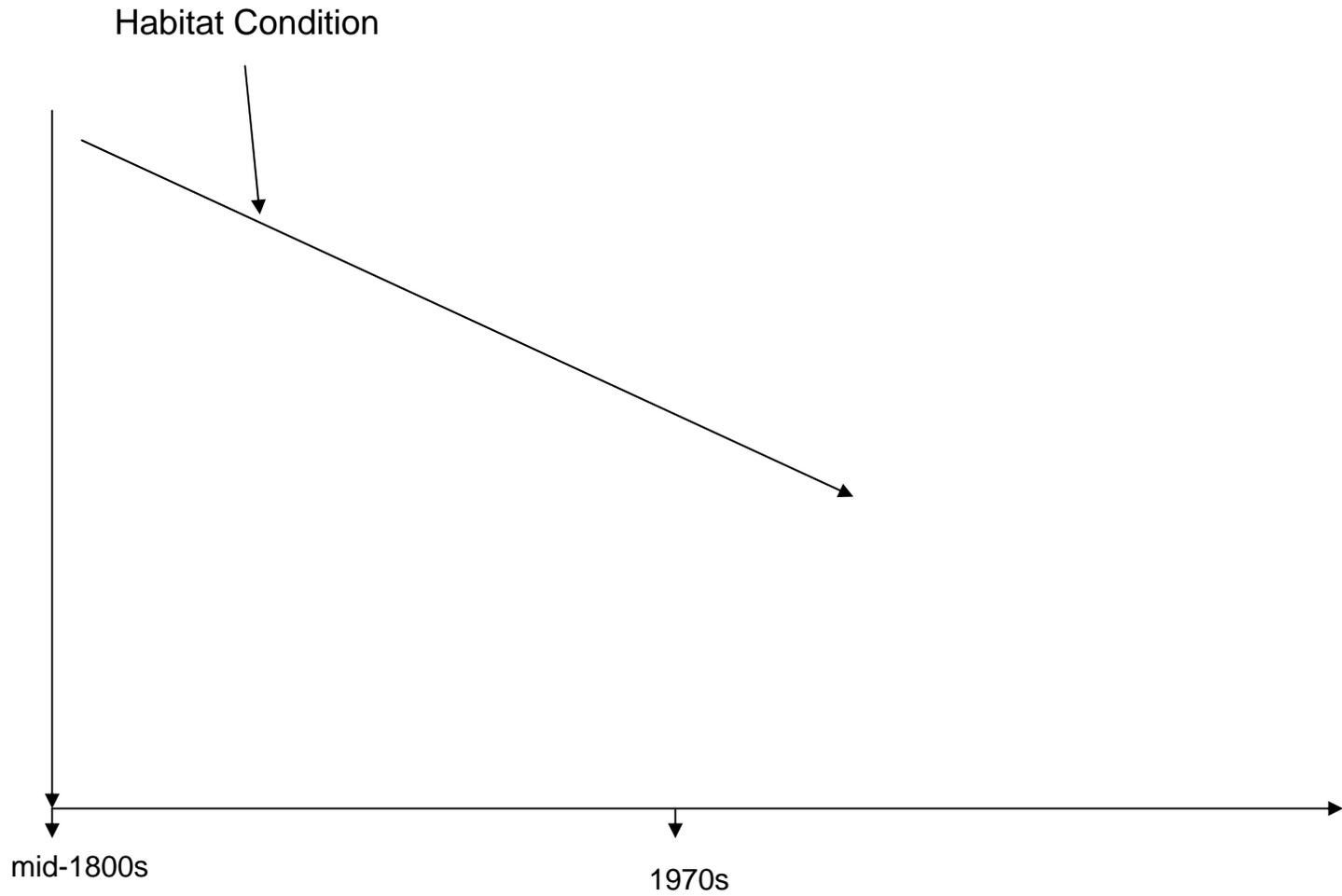
vs.

- Actions to **create change**, e.g., Restoring, Enhancing, Substituting or Creating specific habitats and processes
- Not mutually exclusive – protection can be restorative and *vice versa*

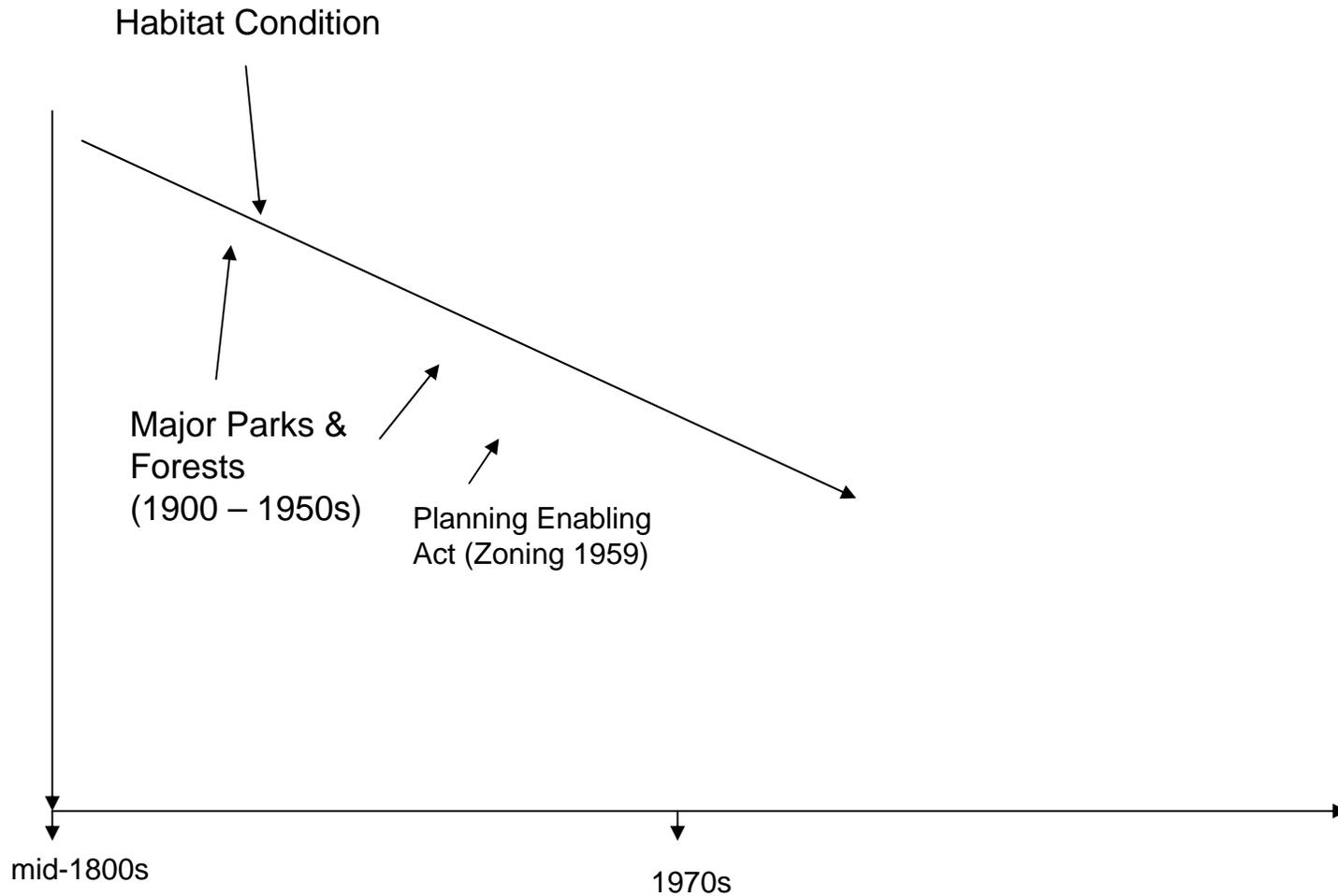
Two Eras?

Pre ~1970 – little understanding or concern about habitat, few adequate protections to protect habitats and limited recognition of importance of habitat processes

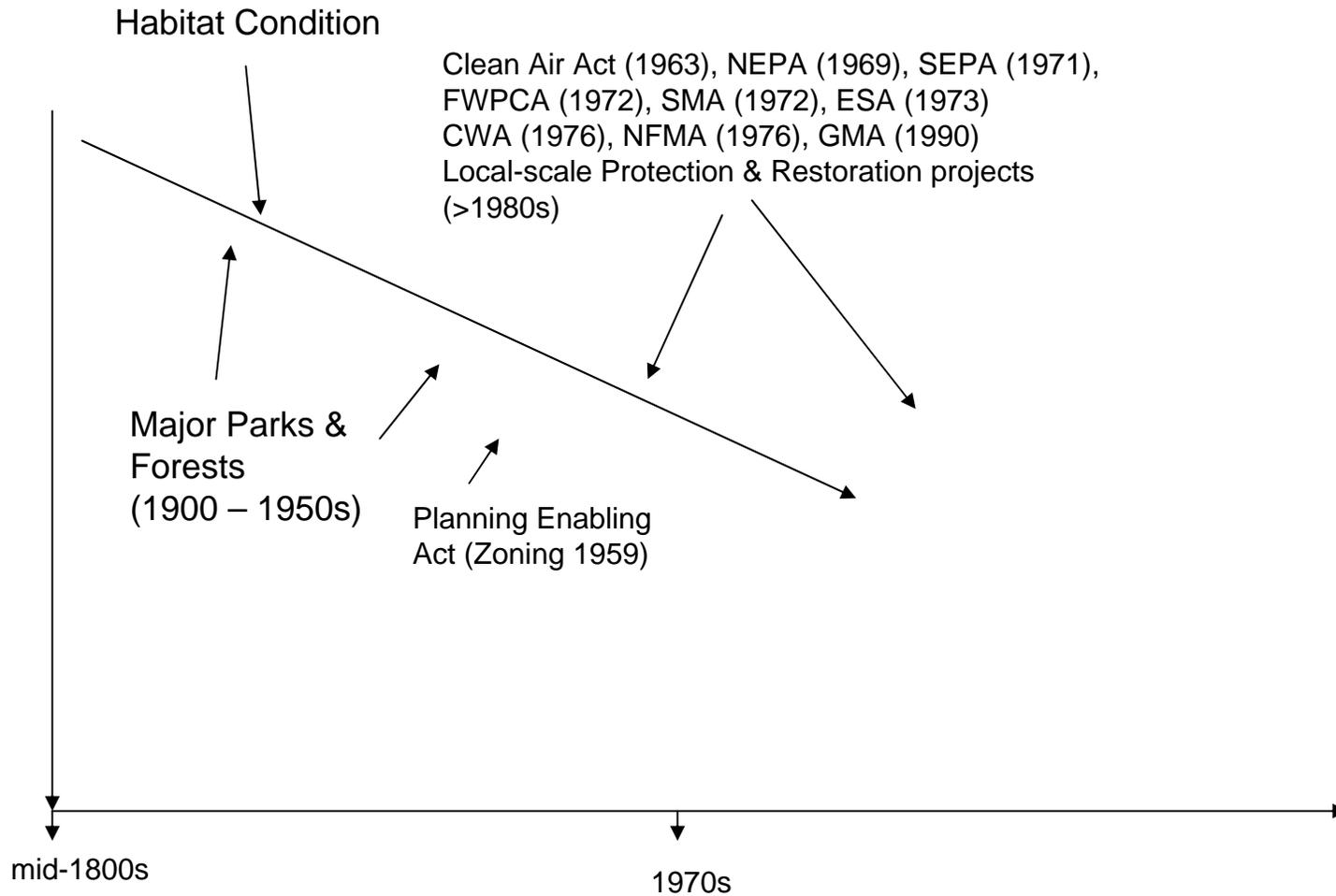
Post ~ 1970 – progressively increasing federal, state and local habitat protection and restoration efforts and incorporation of process-based watershed approach



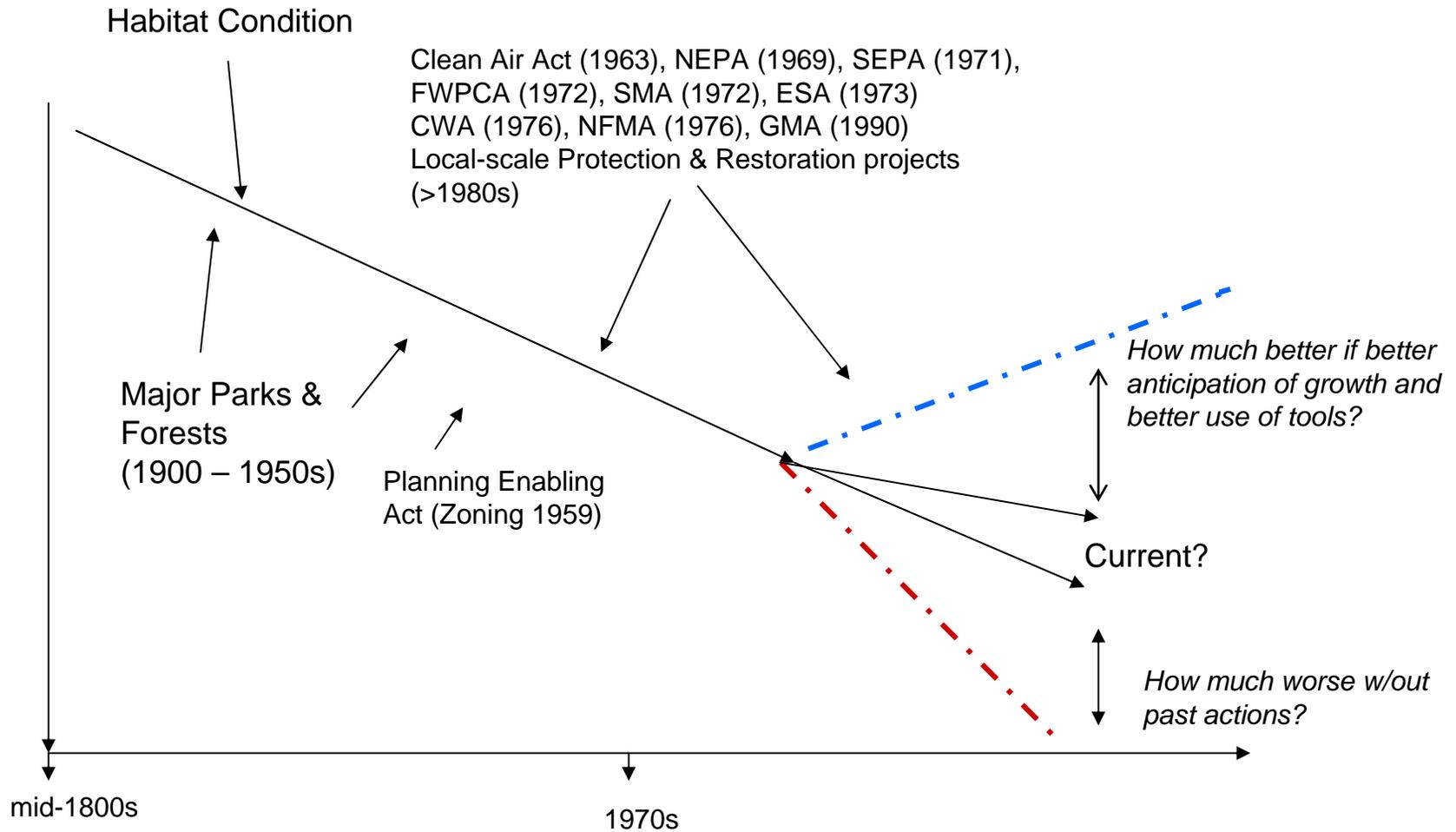
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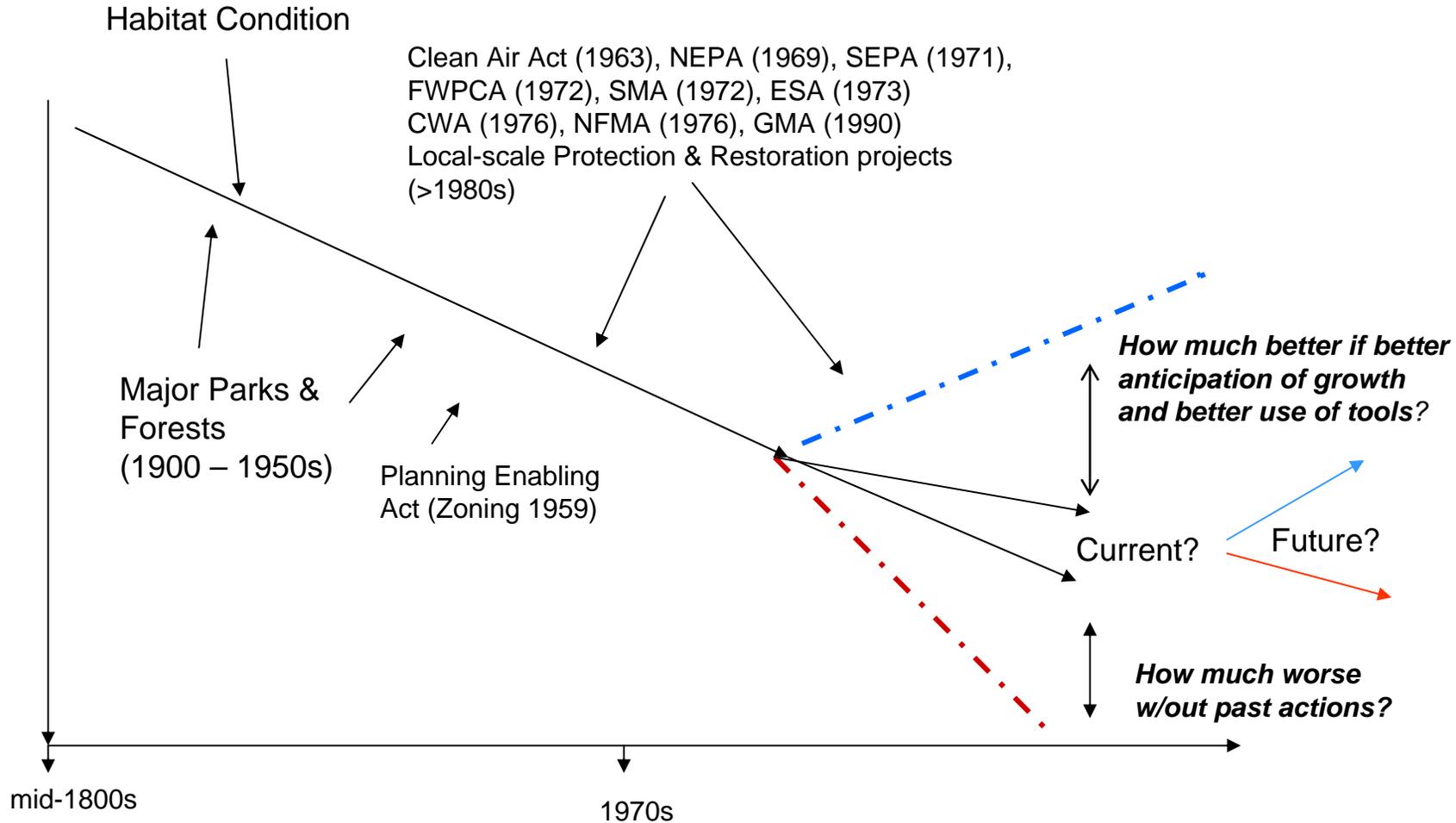


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Bad looks good when worse comes along



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What's been Assessed?

Historically –

- “faith based” approach – assumed good actions will lead to desired results
- very little assessment, particularly at larger scales or across habitat types

• Recently (~ 10 yrs) –

- increasing activity to track and assess actions. Still much that should be done, but have come a long way.
- recent ecological models and reconstructions of historic conditions and development patterns help understand ecological context and potentials

What's Currently Being Done?

- Protection – UGAs to concentrate most intense human growth effects, resource-based zoning, acquisitions and conservation easements, new (and improved?) regulations and BMPs, stewardship and public education
- Restoration – restore connectivity among and complexity within, use a process-based watershed (headwater to marine) perspective, avoidance of overly artificial structures
- Overall increased awareness of the role of context, process, range of variability, and native and invasive/exotic biota

Conclusions

- Ecosystem scale – Comprehensive ecosystem monitoring is lacking, so little is known about the ecosystem-scale effectiveness of our efforts to protect and restore habitat.
- Project or site scale – Increasing monitoring of project and site scale is occurring - mostly related to habitat restoration projects - but little monitoring of the effectiveness of regulatory tools.

Conclusions

- Based on limited set of indicators, we see downward trends despite relatively new regulatory and incentive tools.
- If expect people and institutions to invest in the long-term use of tools, need to monitor and conduct research to:
 - **improve and validate models, and**
 - **know more about effectiveness of protection and restoration tools**