



A Framework for Action: The California Nitrogen Assessment



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Integrated Ecosystem Assessment

(modeled on IPCC and MA)

Assessment questions:

- What are the big sources of nitrogen pollution in California?
- What practices are most effective in mitigating nitrogen pollution?
- What are the policy challenges and opportunities?

Credibility: Do we have enough solid scientific information?

Usefulness: Are there feasible options?

Legitimacy: Issues of public awareness and stakeholder acceptance.

THE David &
Lucile Packard
Foundation

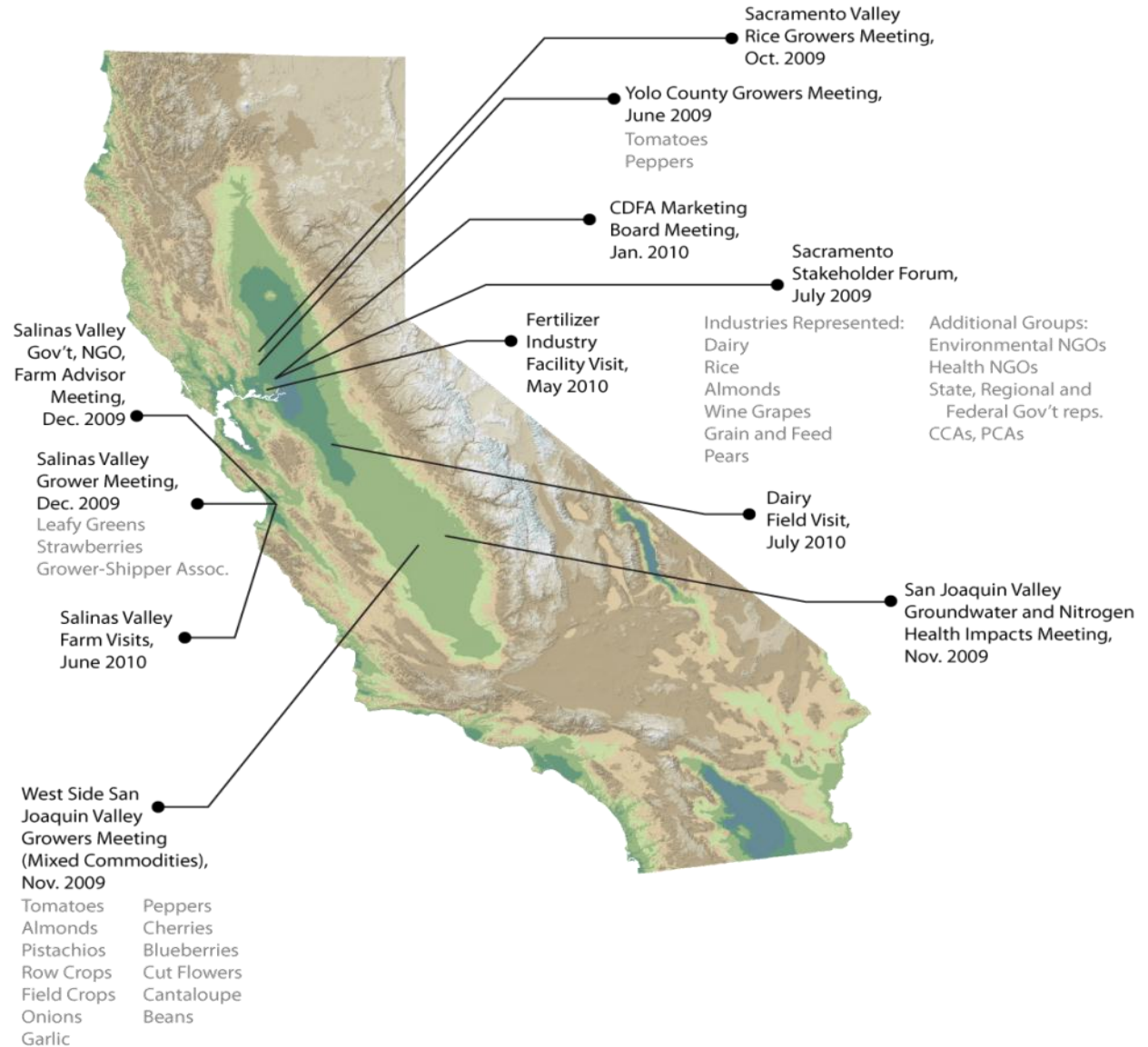
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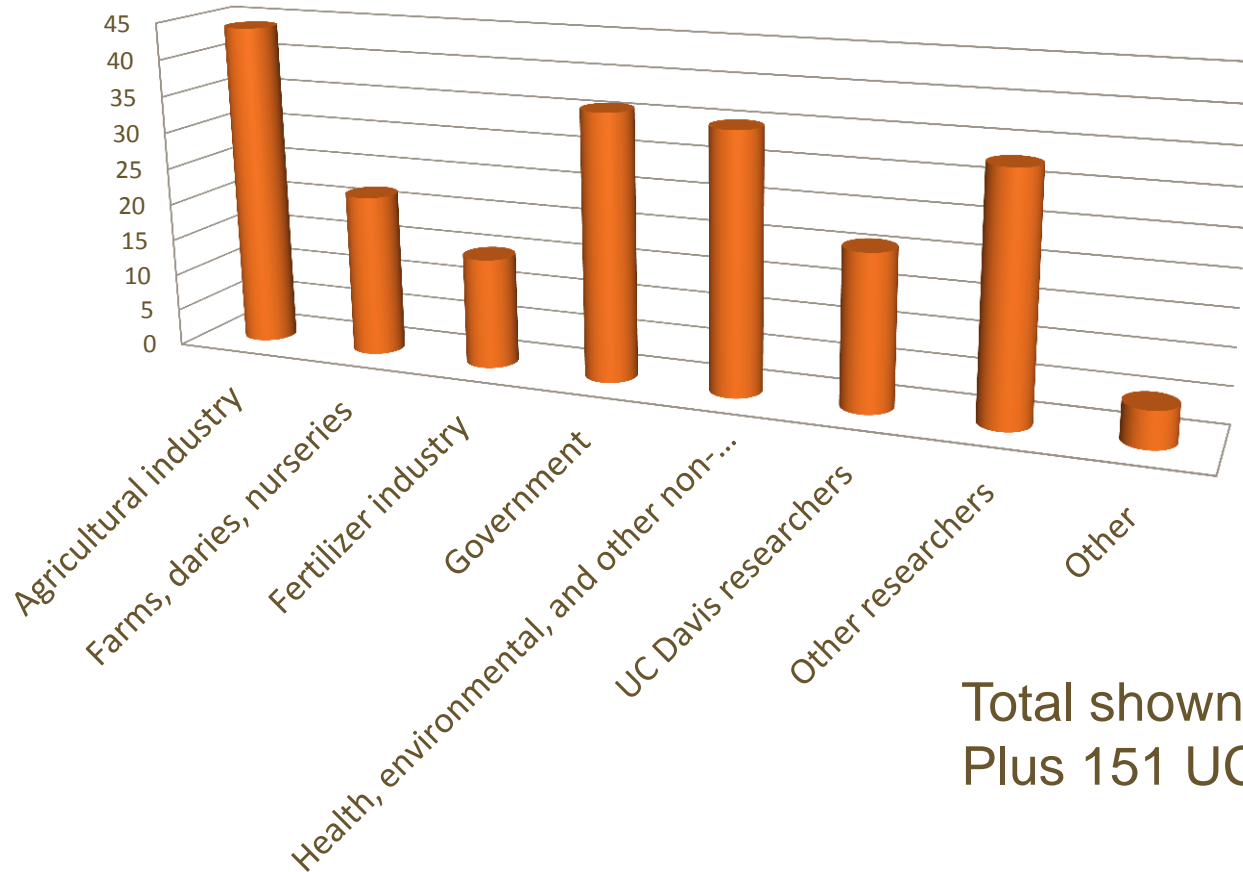
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Where we've been...

does not include numerous additional meetings held at UC Davis, and national and international nitrogen meetings



Whom we've talked to...



Total shown here: 211
Plus 151 UCCE farm advisors

Stakeholder Advisory Committee: 29 members

Updated March 2011

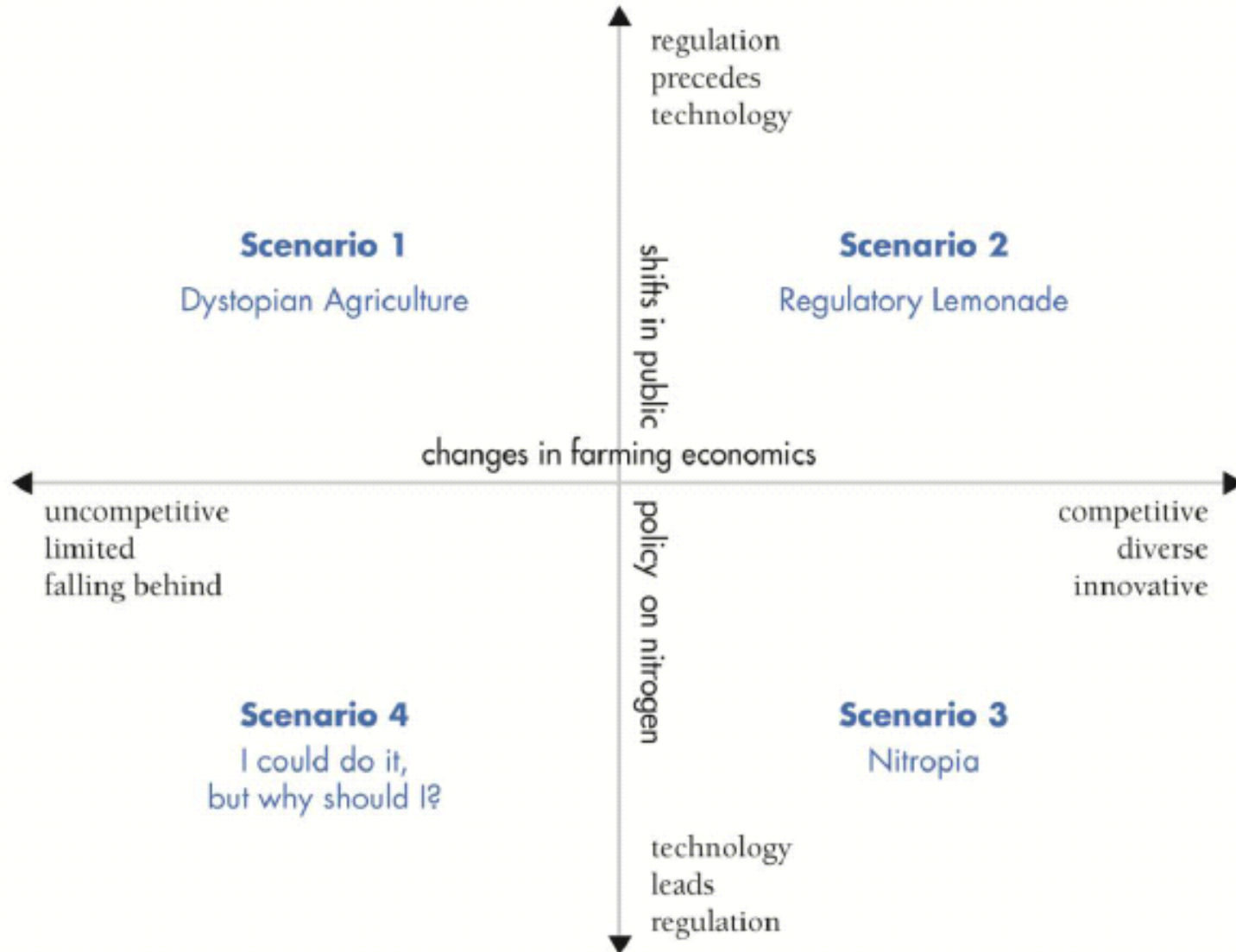
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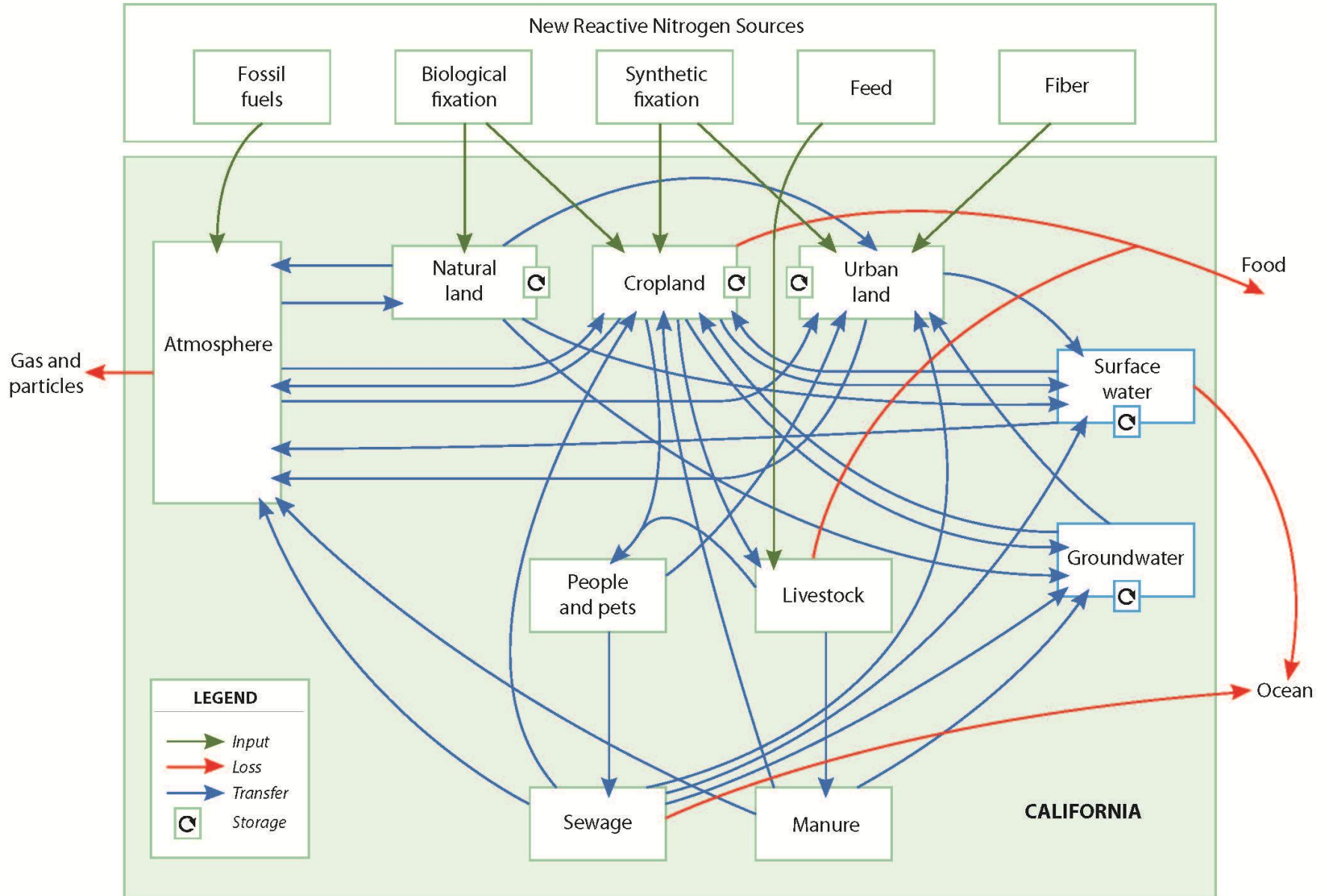
Scenario Matrix

CALIFORNIA NITROGEN ASSESSMENT SCENARIO MATRIX

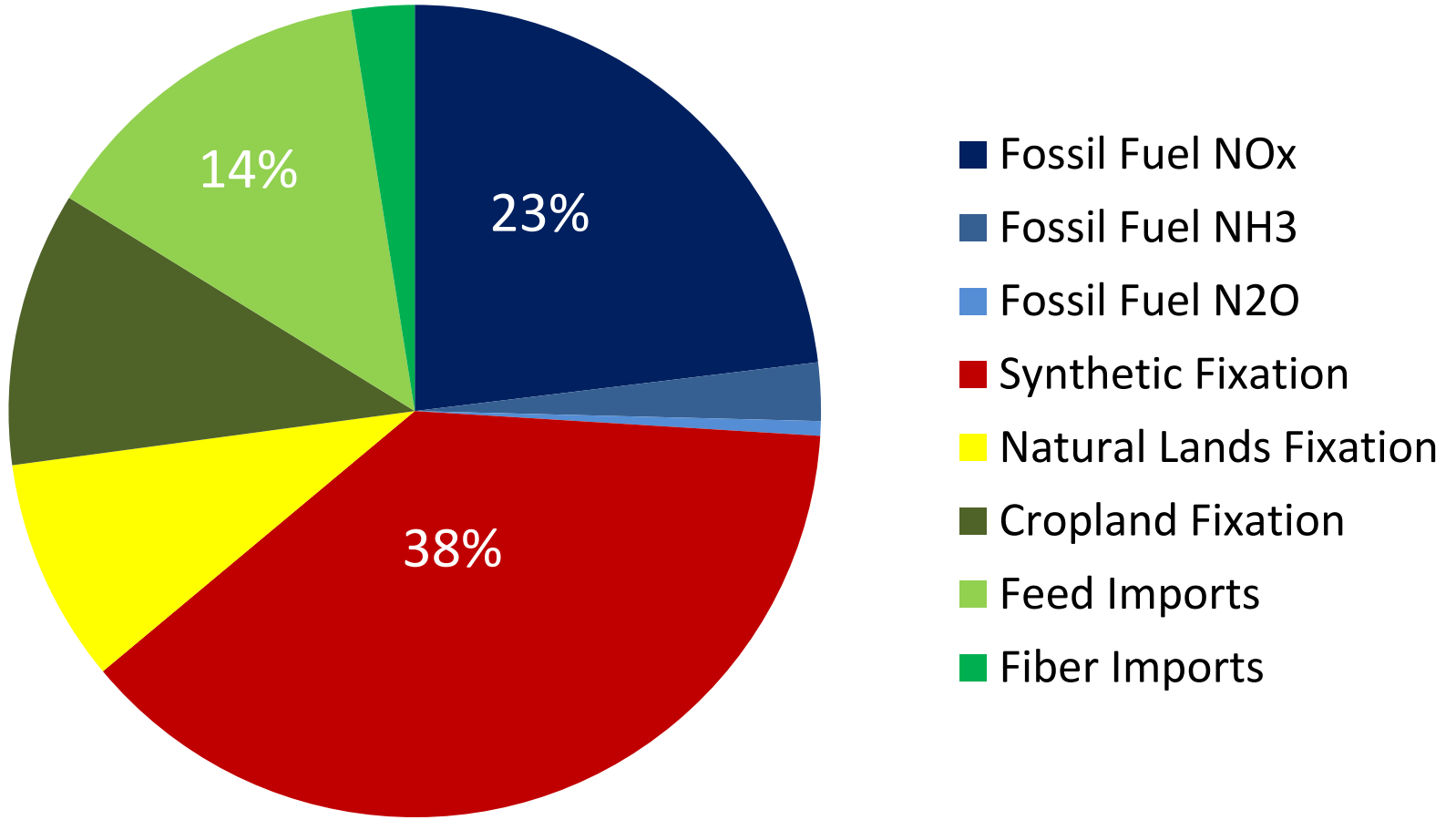


How will nitrogen be managed in California agriculture 20 years from now?

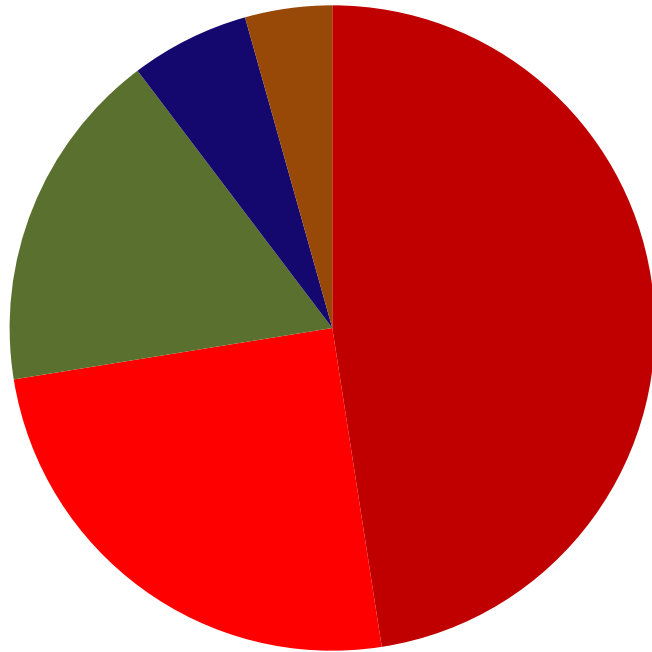
Flows of Nitrogen in California



Statewide N inputs (1,500 Gg N)

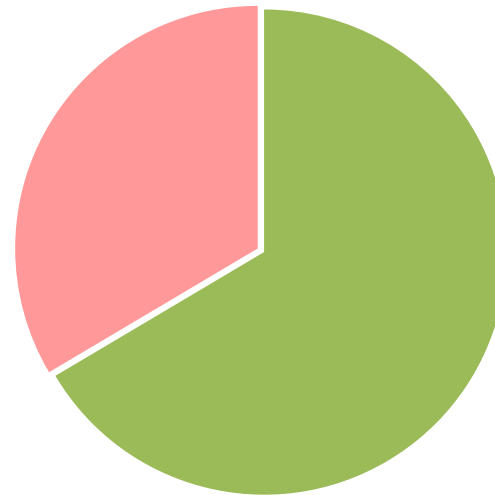


N Flows to Cropland



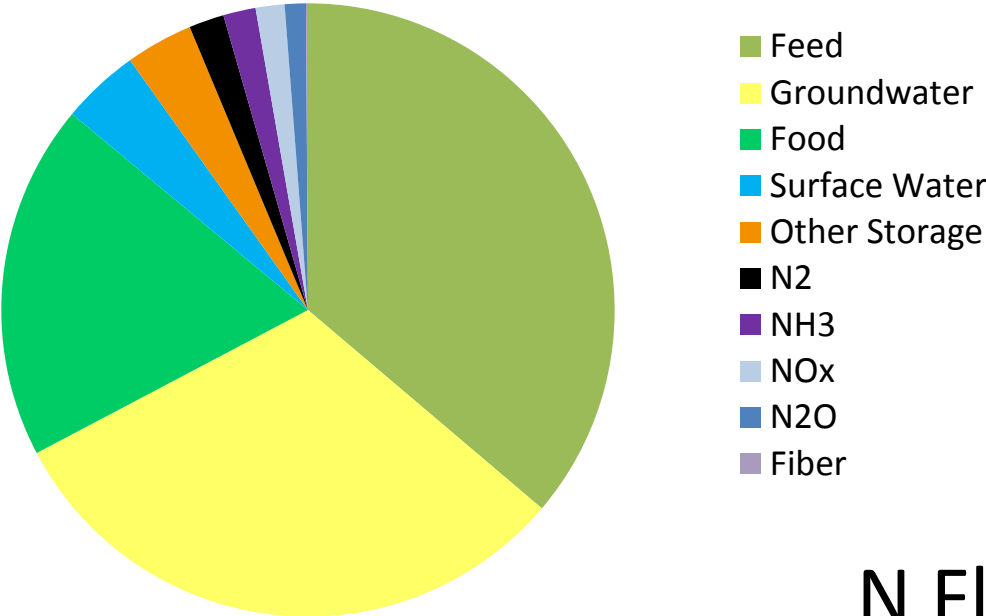
- Synthetic Fixation
- Manure
- Cropland Fixation
- Irrigation
- Deposition

N flows to Livestock

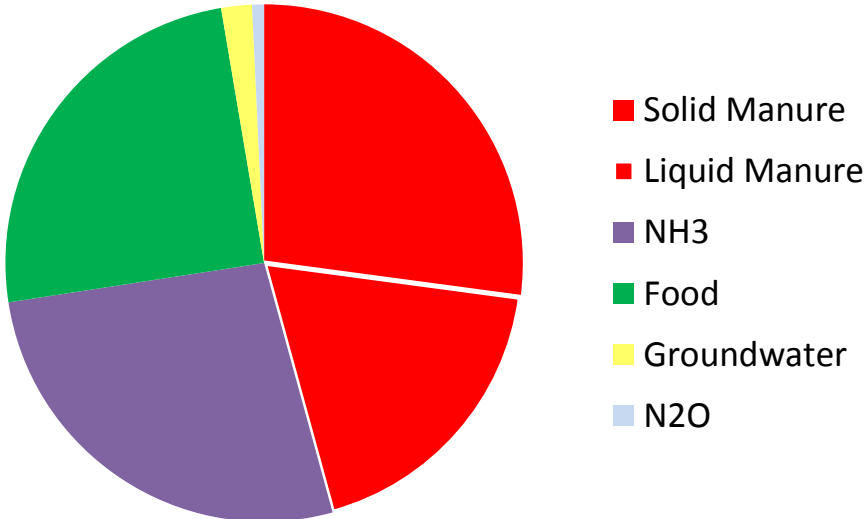


- California Feed
- Imported Feed

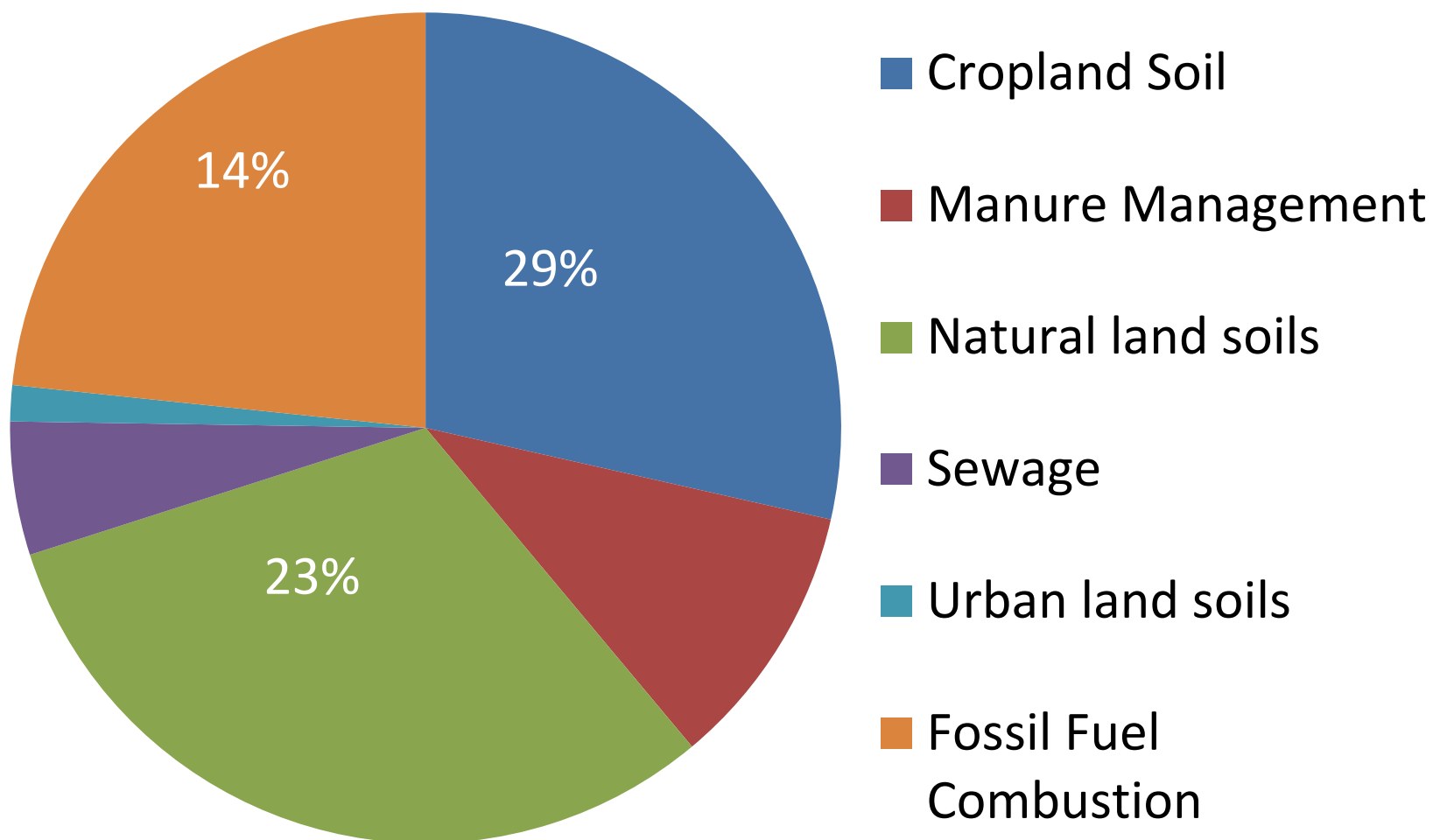
N Flows Out of Cropland



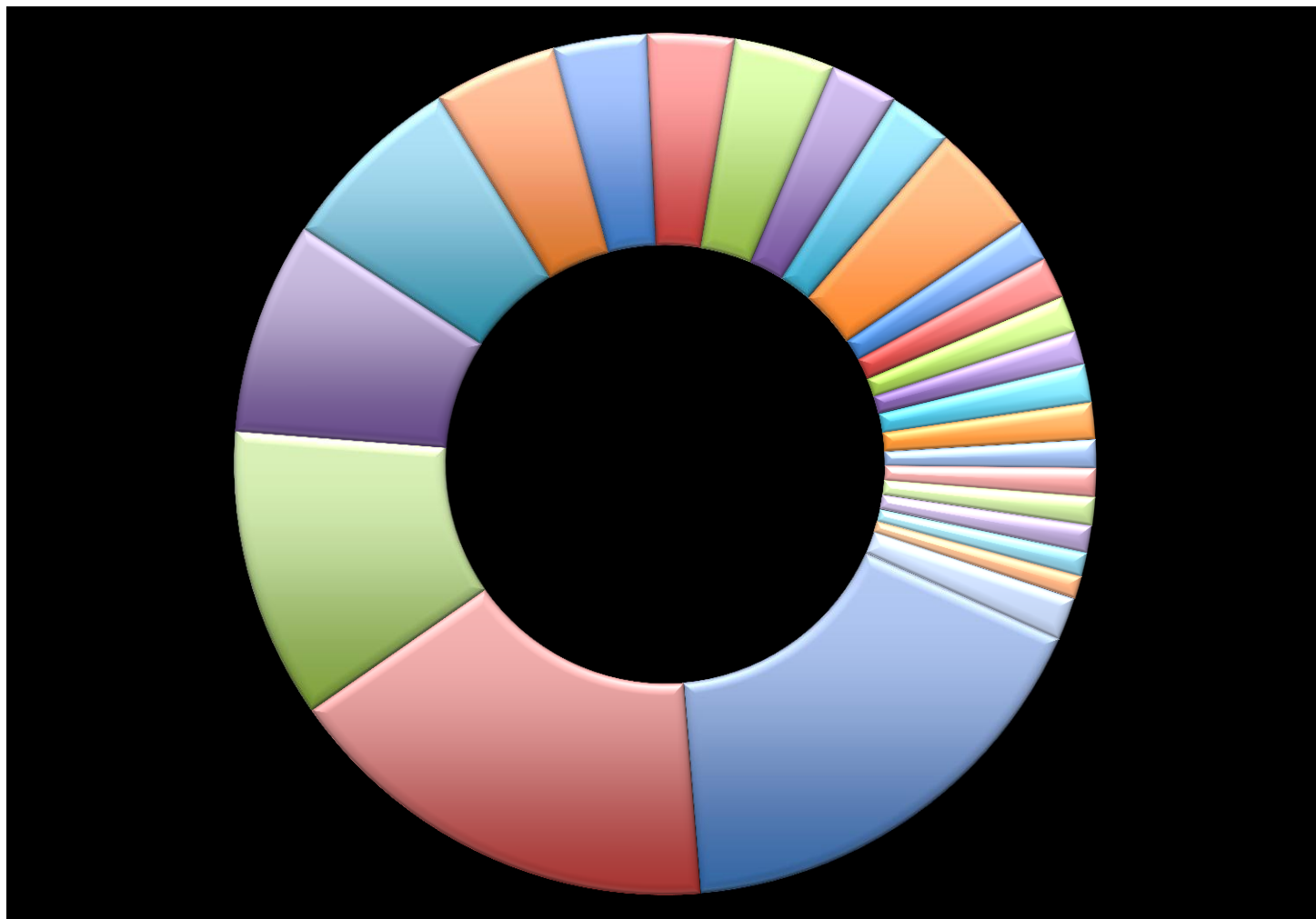
N Flows Out of Livestock



N₂O Emissions (39 Gg N₂O-N)



Radiative forcing due to nitrous oxide: Based on IPCC default emissions factors



Assessment Products

- Full report – will include:
 - **Technical feasibility** of reducing negative impacts from nitrogen leakage
 - **Economic feasibility** of implementing best practices
 - **Policy options** and their potential to mitigate problems
- Outreach items to targeted audiences:
farmers/ranchers, policy makers, and others

For more information:

<http://nitrogen.ucdavis.edu>

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