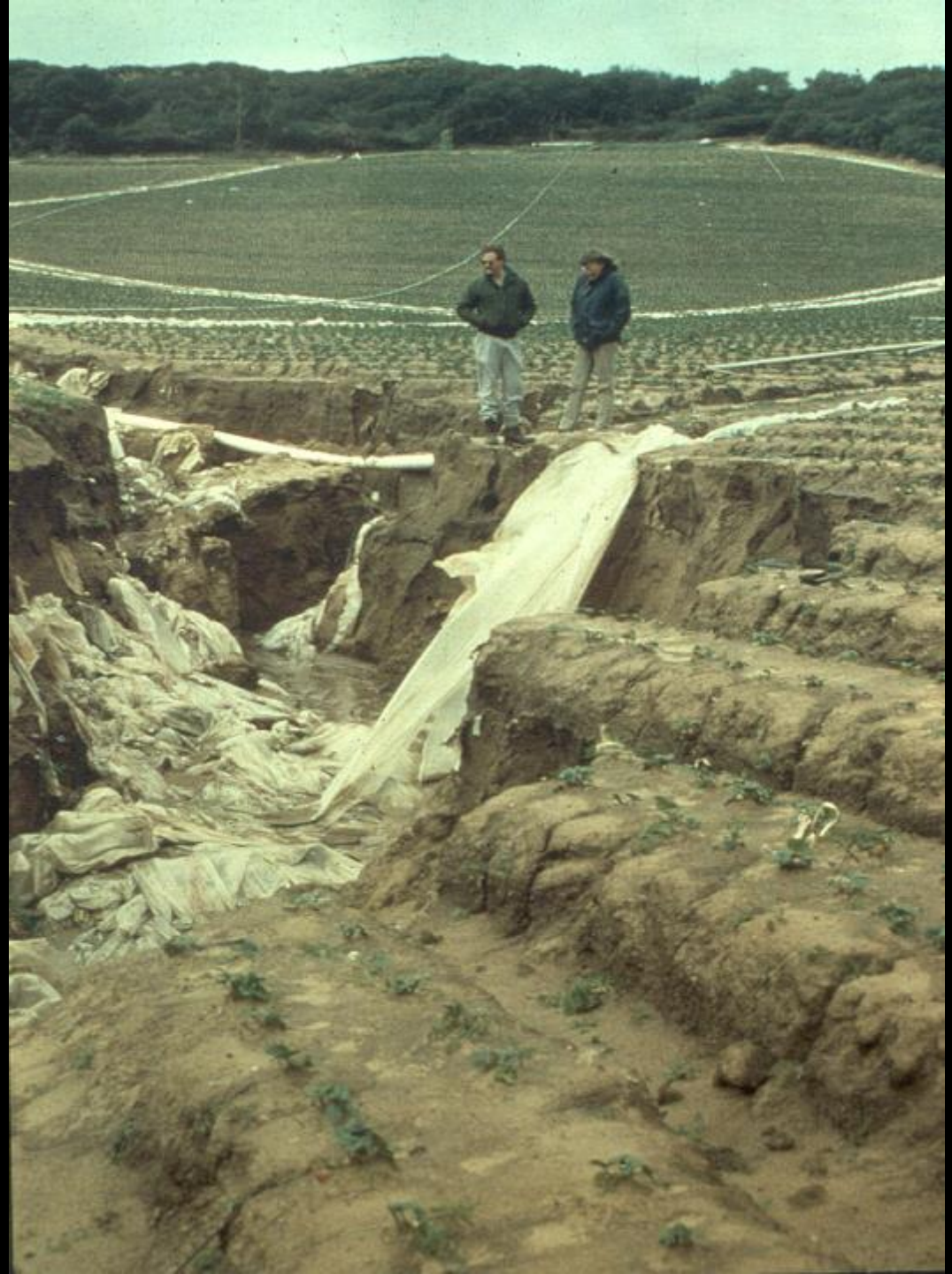
Conservation Convergence: Restoring Habitat, Sustaining Farms and Protecting Groundwater

A case for multiple objectives in conservation land acquisition.



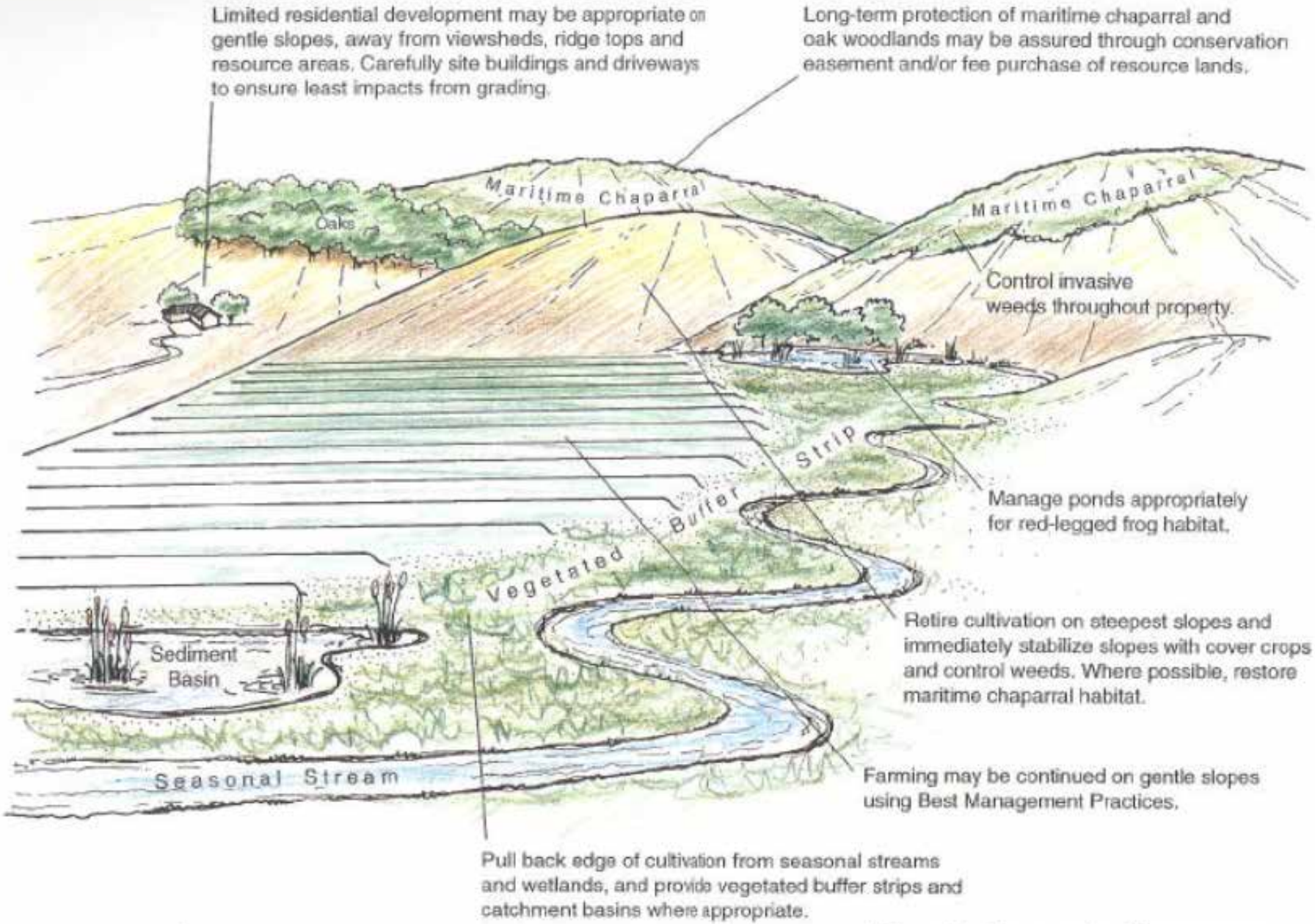


Figure 7: Conservation Easement on a Hypothetical Elkhorn Highlands Farm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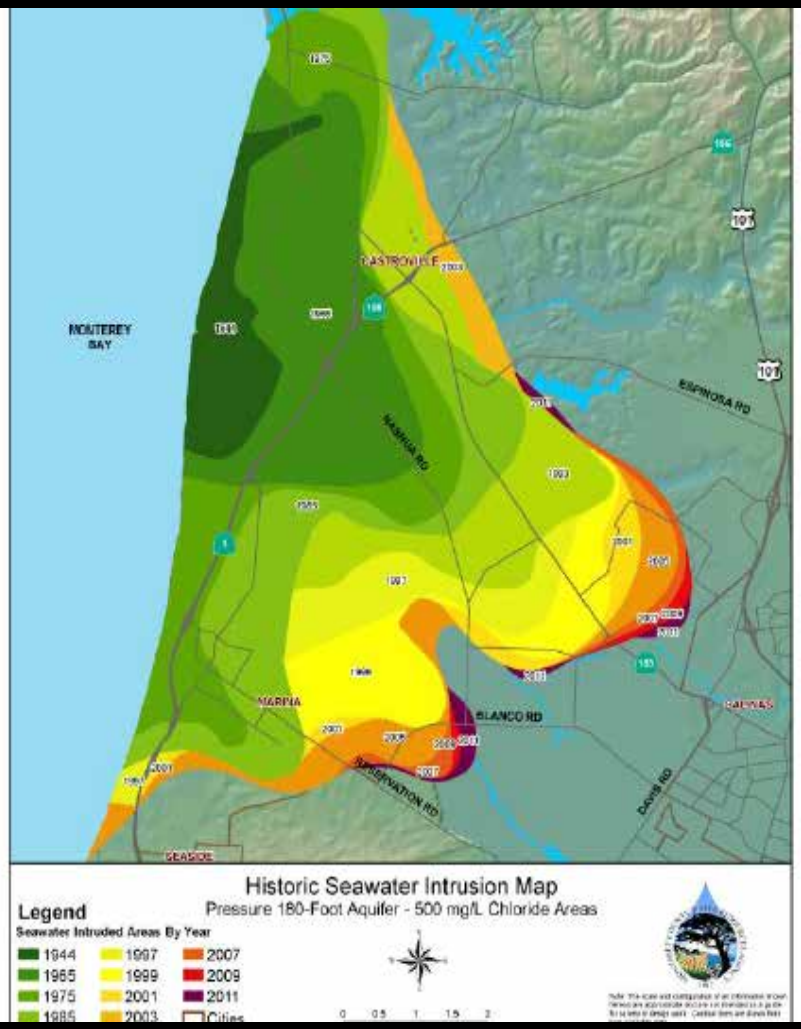
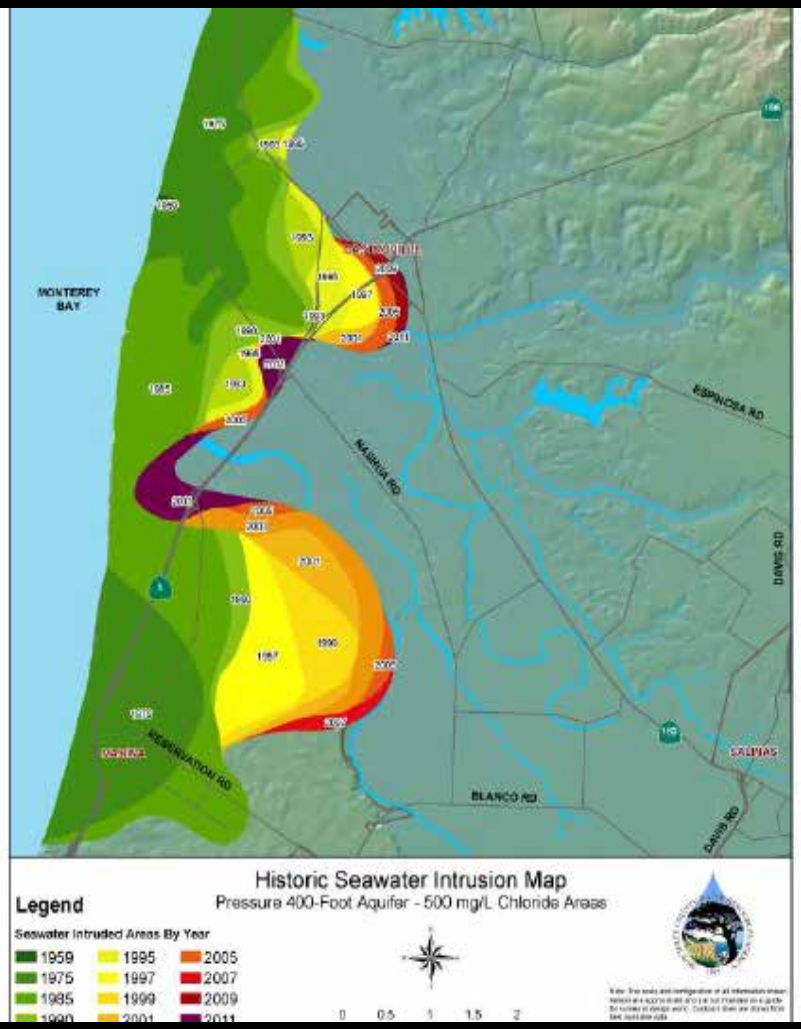
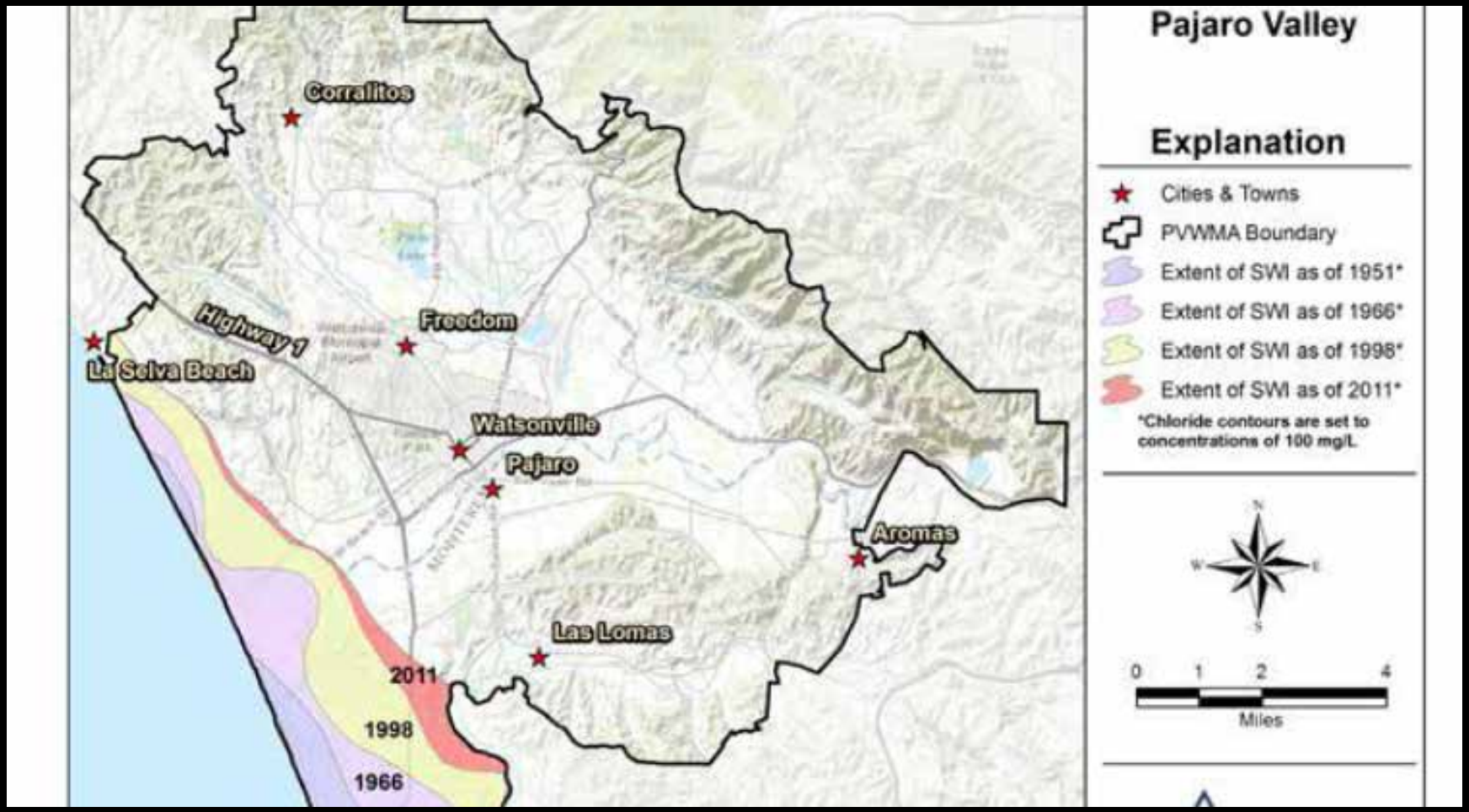

MONTEREY BAY
CASTROVILLE
ESPINOSA RD
MARINA RD
MARINA
BLANCO RD
RESERVATION RD
DAVIS RD
SALINAS
SEASIDE
Historic Seawater Intrusion Map
Pressure 180-Foot Aquifer - 500 mg/L Chloride Areas
Legend
Seawater Intruded Areas By Year
1944
1965
1975
1985
1997
1999
2001
2003
2007
2009
2011
Cities
0 0.5 1 1.5 2


MONTEREY BAY
CASTROVILLE
ESPINOSA RD
MARINA RD
DAVIS RD
MARINA
RESERVATION RD
BLANCO RD
SALINAS
Historic Seawater Intrusion Map
Pressure 400-Foot Aquifer - 500 mg/L Chloride Areas
Legend
Seawater Intruded Areas By Year
1959
1975
1985
1990
1995
1997
1999
2001
2005
2007
2009
2011
0 0.5 1 1.5 2


Pajaro Valley
Explanation
Cities & Towns
PVWMA Boundary
Extent of SWI as of 1951*
Extent of SWI as of 1966*
Extent of SWI as of 1998*
Extent of SWI as of 2011*
*Chloride contours are set to concentrations of 100 mg/L
N
W
E
S
0
1
2
4
Miles
Corralitos
Freedom
Highway 1
La Selva Beach
Watsonville
Pajaro
Aromas
Las Lomas
2011
1998
1966

Ground water conservation in Elkhorn

Water use on slough lands

- 1 Acre of Hillside Berries =
- 3 acre ft. of water
- 1 acre ft. of water =
- 325,000+ gallons
- 1 Acre of Berries uses
- Just under 1 million gallons of water/year

700 acres of historic farm land retired

- 700 X 3 Acre ft/acre/year=
- >2,000 acre ft. /year =
- >650,000,000 gallons/yr
- Left in the ground.

Conclusion

- On the way to protecting the key habitats and bio-diversity of the Slough we can contribute to addressing ground water conservation and management.
- Reducing pumping of the aquifer and increasing recharge potential by revegetation and restoration is a convergent approach to these intertwined issues.