KEYNOTE · WED, OCT 14 · 9:45-10:15 AM

The Climate Solution Most Strategies Are Missing, and What We Can Do About It

Brett KenCairn, Senior Policy Advisor for Climate and Resilience, City of Boulder

Climate plans focus on burning fossil fuels, but degraded land and broken carbon and water cycles are the other half of the problem. Brett KenCairn showed how Boulder is restoring living systems from backyards to watersheds, and why towns at the top of the watershed should treat water as the core issue.

KEY TAKEAWAYS

1. **Climate change has two legs, not one.** Scientists named both in 1971: burning fossil fuels and degrading the living world. One study found almost a third of excess atmospheric carbon came from soil loss.
2. **In the West, the issue is water.** Degraded land sends huge volumes of water into the atmosphere and leaves landscapes dry. The UN estimates about 70% of global land is deeply degraded.
3. **We have restored land at scale before.** Dust Bowl recovery stabilized the plains within a decade. On China's Loess Plateau, local people with simple hand tools revegetated an area the size of Rhode Island in about 10 years.
4. **Restoration can change local climate.** In Kansas and Oklahoma counties where about 70% of land has a living root year round, areas report one to two inches more moisture than surrounding land. We can change climate where we live.
5. **Plant oases where you are.** A turf yard in Boulder replaced with native plants, watered little, became an oasis within three years. Start in front yards and scale up to the bioregion.

WHAT LOCAL OFFICIALS CAN DO

- ☐ **Build a coalition of organizations, not just members.** Cool Boulder enlisted 60-plus community groups, which together reach into every part of town.
- ☐ **Keep the work simple.** Focus on three things: connected canopies (trees and especially shrubs), pollinator habitat, and absorbent landscapes that hold every drop of rain.
- ☐ **Pay trained community stewards.** Boulder funds trained residents 10 to 15 hours a week to care for trees and absorbent landscapes that schools lack the budget to maintain.
- ☐ **Map canopy gain and loss by parcel.** Track tree canopy gain and loss on every parcel, then aggregate to neighborhoods or census block groups to see where to focus planting.
- ☐ **Use beehives to monitor biodiversity and toxins.** One hive's foragers gather about 50,000 data points a day; sequencing their pollen from a few hives can cover a whole community.
- ☐ **Design fire-resilient landscapes, not just removal.** Boulder is weighing a homeowner assistance program for fire-resilient landscapes that also provide shade, absorb moisture and support biodiversity.
- ☐ **Assess the landscape at watershed scale.** Boulder used satellites to flag degrading land across 500 square miles of conservation district land.

BY THE NUMBERS

~1/3 Excess atmospheric carbon from soil loss (Sanderman)	**~70%** Global land deeply degraded (UN estimate)
~50% Of Earth's plant biomass left today	**60+** Community organizations in Cool Boulder
1 to 2 in More moisture in regenerative farm areas, KS and OK	**500 sq mi** Landscape Boulder assessed by satellite

WATCH OUT FOR

- ! Satellite analysis shows much of Boulder's surrounding land is degrading; with Colorado River cuts, removing irrigation could turn it to desert.
- ! School landscapes struggled without maintenance budgets. Plan and fund ongoing stewardship, not just installation.

RESOURCES

Cool Boulder
coolboulder.org

The Limits to Growth (1972)
clubofrome.org/publication/the-limits-to-growth/

Kansas and Oklahoma regenerative ag findings
A Wichita State researcher's talk on Kansas and Oklahoma farm moisture, which KenCairn urged officials to watch

Peer community
Park City, Utah: KenCairn suggested a "think like a mountain" water analysis

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CONTACTS

Brett KenCairn
Senior Policy Advisor for Climate and Resilience, City of Boulder