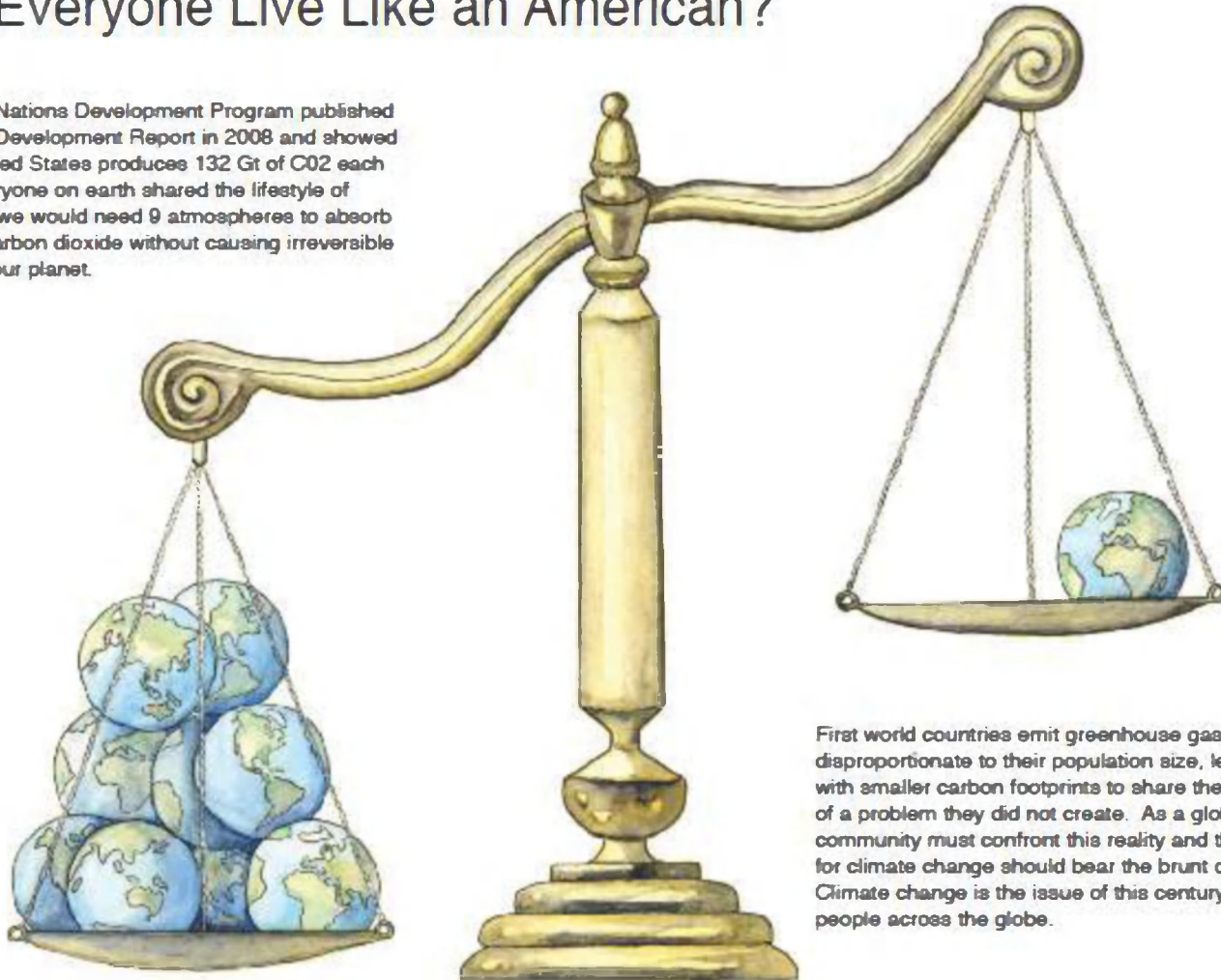


Climate Justice

Can Everyone Live Like an American?

The United Nations Development Program published the Human Development Report in 2008 and showed that the United States produces 132 Gt of CO₂ each year. If everyone on earth shared the lifestyle of Americans, we would need 9 atmospheres to absorb this much carbon dioxide without causing irreversible damage to our planet.



First world countries emit greenhouse gases grossly disproportionate to their population size, leaving countries with smaller carbon footprints to share the consequences of a problem they did not create. As a globe, the human community must confront this reality and those responsible for climate change should bear the brunt of its costs. Climate change is the issue of this century, affecting people across the globe.

Alpine Ecosystems

A Changing Climate: Rocky Mountain Alpine Ecosystems Today and Tomorrow



Intact Rocky Mountain Alpine Ecosystem

The alpine ecosystem of the Rocky Mountains is characterized by the krummholz forms of whitebark pine and the short, hearty plants that only grow for a few months of the year. Most of the time, this system is blanketed with snow which flora and fauna is adapted to. The pikka does not hibernate but instead makes haystacks underneath the snow. The white-tailed ptarmigan's snowy plumage helps the bird stay camouflaged during the winter. A system of rock and ice, glaciers have carved out this dramatic landscape.

Increasing Temperature

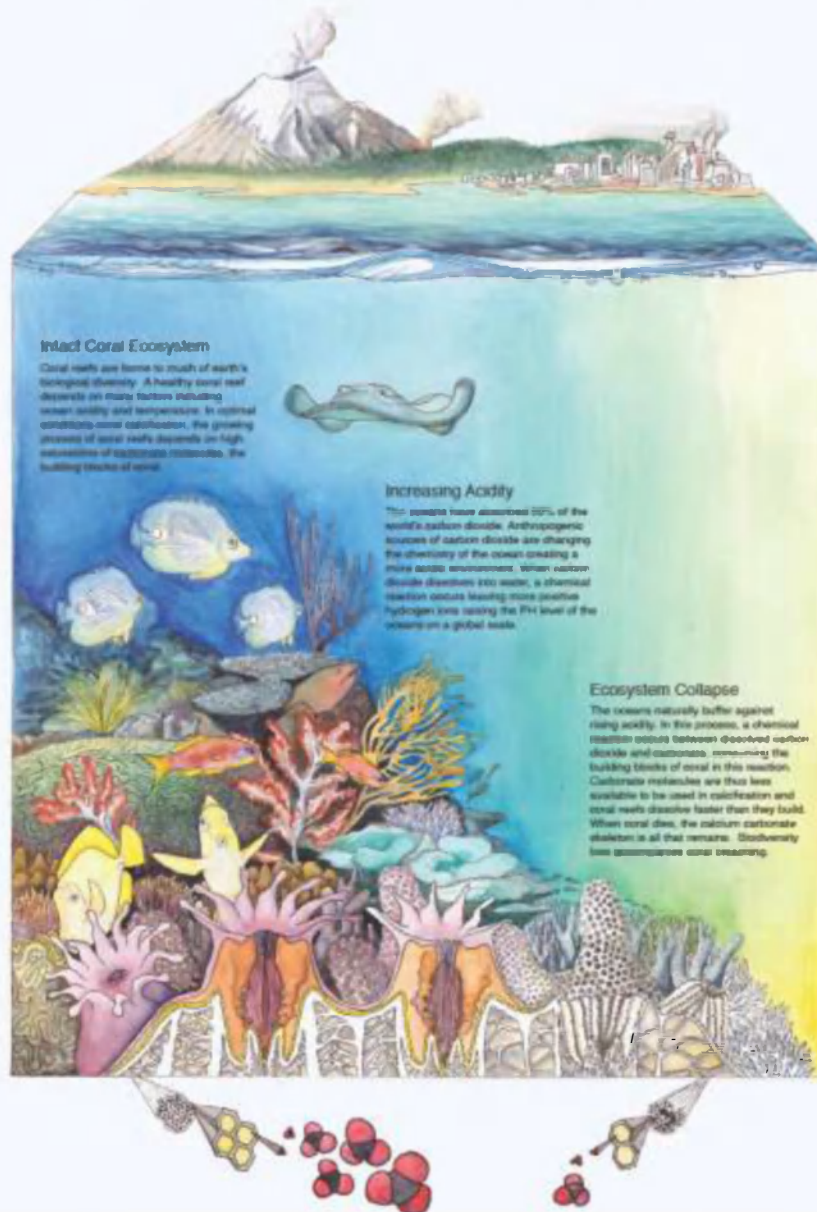
The biggest changes in temperature due to climate change in this environment have occurred during the month of March. Snowmelt is happening much sooner and some of the first plants to peak through the snow, like glacier lilies, are blooming earlier. Warming temperatures has resulted in melting glaciers and creeping treelines as well.

Ecosystem Collapse

Eventually the alpine ecosystem will be replaced by a lower elevation scheme. White bark pines, historically protected from native pine bark beetles are now infested due to the increased presence of lodge pole pine. Having no evolutionary mechanisms to counteract the beetles, much of the ancient forests of high altitude whitebark pine will be wiped out within this century. A changing forest regime will accompany warmer temperatures and dryer winters. Forest fire may be an increasing hazard during the next century.

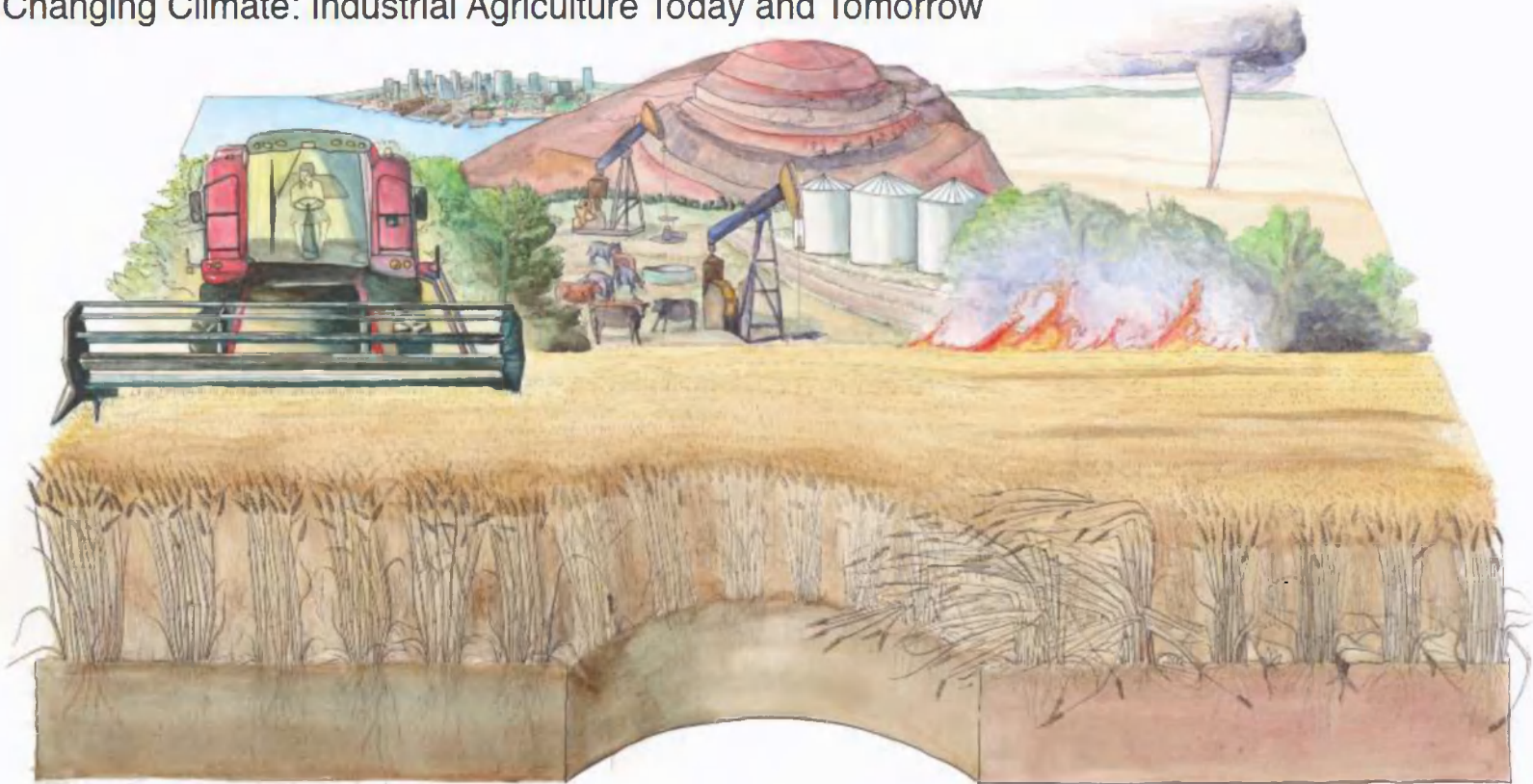
Coral Reefs

A Changing Climate: Coral Reefs Today and Tomorrow



Industrial Agriculture

A Changing Climate: Industrial Agriculture Today and Tomorrow



Reliance on Fossil Fuels

Industrial Agriculture uses fossil fuels each step of the way in delivering food to the dinner table. Large machinery like combines burn fossil fuels for tilling, planting and harvesting. Minerals like phosphorus are mined and transported to factories where more fossil fuels are used to process these minerals into fertilizer, spread over crops each year. The demand for meat products is also added into the footprint of industrial agriculture. Raising animals for food emits much more greenhouse gases than raising crops. Finally, food is processed and transported inefficiently across the globe.

Inability to Predict

A changing climate means difficult planning for farmers. Farmers make bets each year when to harvest and plant. Shifting rain seasons, early and intense heat waves makes it difficult for farmers to make these short-term decisions.

System Collapse

Droughts, fires, flooding, increased frequency and intensity of unusual weather events like tornados all threaten industrial agriculture. Because industrial agriculture operates on a global level, food security is a pressing issue. A damaged wheat crop from pest infestation in North America could mean food shortages across the globe.