

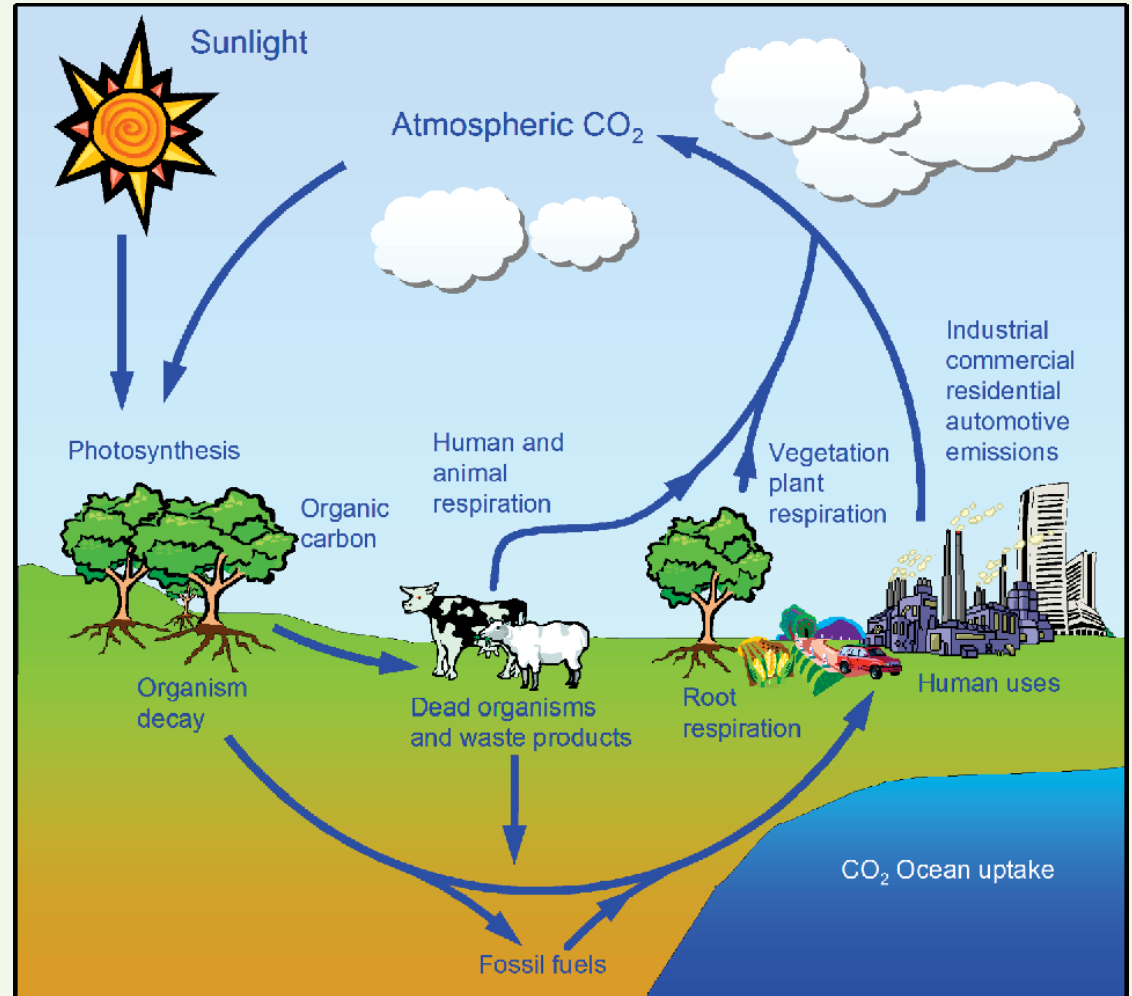


National Indian Carbon Coalition

Providing Resources and Training for Greenhouse Gas Management in Indian Country

What is Carbon?

In the context of climate change, "carbon" is commonly used as a shorthand for carbon dioxide, the most important greenhouse gas released by humans.



What is a carbon footprint?

- When you use energy or products manufactured with fossil fuels you generate carbon dioxide and other greenhouse gas emissions (GHGs) that contribute to climate change.
- The combination of emissions caused by your home, transportation, and daily life is known as your "**carbon footprint.**"

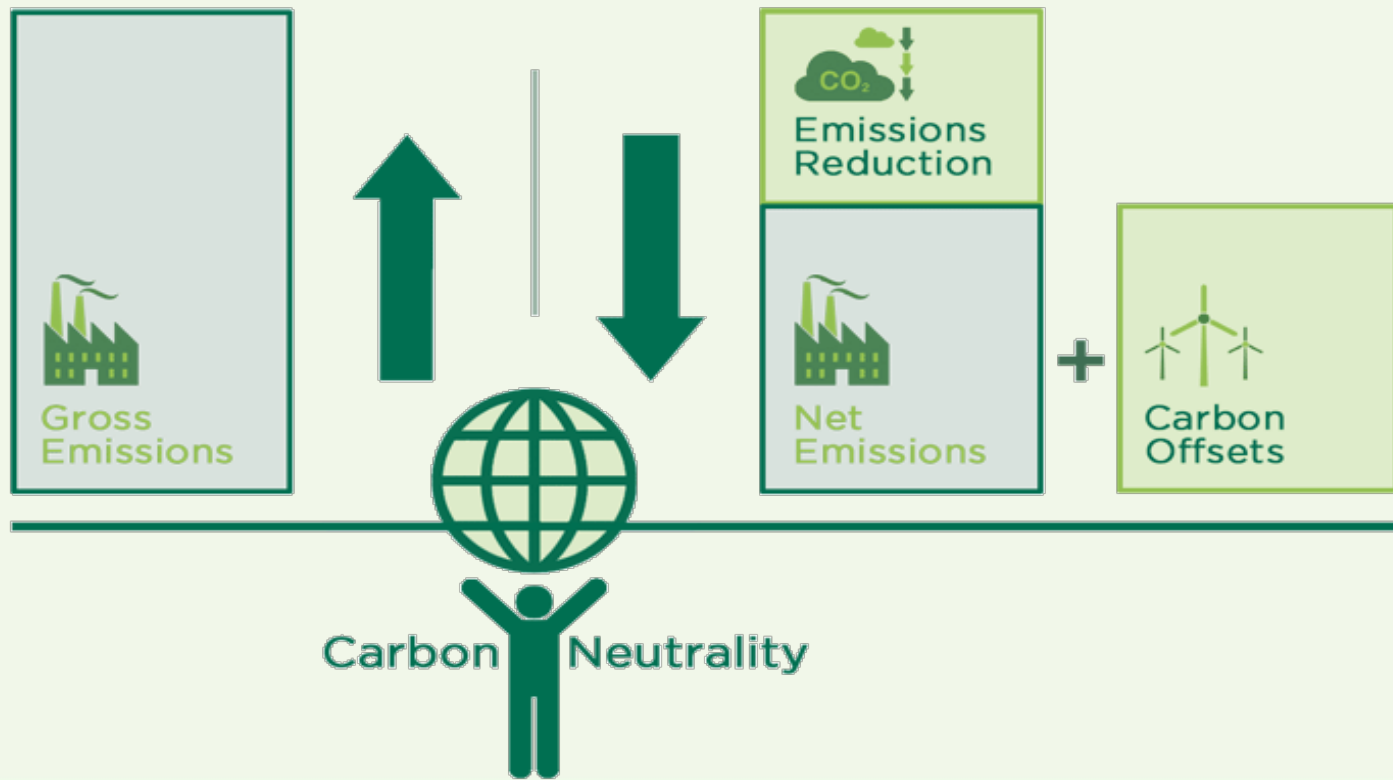


What is a carbon offset?

- A **carbon offset** is a reduction in emissions of carbon dioxide or greenhouse gases (GHGs) made in order to compensate for or to offset an emission made elsewhere.
- An **carbon offset** is defined as a tradeable compliance instrument issued by the California Air Resources Board (CARB) that represents a GHG reduction or removal enhancement of one metric ton of carbon dioxide equivalent (CO₂e). It must be **measureable, quantifiable, permanent, verifiable,** and **enforceable.**

What is a carbon offset?

- For specific purposes, this can mean one metric ton of CO₂e being taken from the air and transformed into living biomass.



Offset Project Registries

- A key component of the California Cap-and-Trade program provides for the creation of **Offset Project Registries**, which help the California Air Resources Board (ARB) administer the Compliance Offset Program.
- Offset Project Registries need to meet specific regulatory criteria for approval. These registries help facilitate the listing, reporting, and verification of offset projects developed using the Compliance Offset Protocols, and issue registry offset credits.

Offset Project Registries

- There are three approved Offset Project Registries: **American Carbon Registry** (ACR), **Climate Action Reserve** (CAR), and **VERRA**.
- Each Registry develops and approves Standards & Methodologies for projects



CLIMATE
ACTION
RESERVE



Methodologies

- Technical processes used by project developers to quantify the greenhouse gas benefits of different project types.
- They set out requirements for project developers to determine project boundaries, set baselines and assess additionality (whether a project or activity creates additional emissions reduction that would not have occurred if there were no changes in practice management practices).
- All methodologies set out criteria to determine whether a particular project is eligible for generating emission offsets for sale on a carbon credit or other environmental value market.

Methodologies

- Energy Generation
 - Switch from non-renewable biomass for thermal applications
- Energy Demand
 - Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass
- Transportation
 - Improved Efficiency of Vehicle Fleets
- Waste Handling and Disposal
 - Landfill Methane Collection and Combustion

Methodologies cont.

- **Agriculture, Forestry, Land Use**
 - Improved Forest Management (IFM) for Non-Federal U.S. Forestlands
 - Avoided Conversion of Grasslands and Shrublands to Crop Production
 - Compost Additions to Grazed Grasslands
 - Thermal Energy Production with or without Electricity

The Carbon Credit Exchange: Who Participates?

Buyers

In the compliance market, buyers are supplier industries required to meet emissions standards who purchase credits as a way to compensate for not reaching their emissions goals. Industries are only allowed to use offset credits as 8% of their total emissions.

Project Developers

The entity with legal authority to implement that offset project.

Carbon credit developers are businesses that seek to induce the interaction between the Offset Project Operator and the California ARB, and to line up a buyer.

Sellers

Sellers can be landowners whose rangelands, wetlands or forests sequester and store atmospheric carbon and offset climate change.

Sellers can also be those participating in renewable energy projects such as turbines, PV panels, hydropower, biofuel substitution, methane destruction, transportation efficiency, or filtering water in developing countries.



Determining Economic Feasibility

Calculating the Dollar Value: How Much Carbon is Your Land Sequestering?

There are Two Main Factors that Determine the Amount of Returns of a Project:

Natural Resource Density

Sequestration rates are higher with a denser resources

Land Area

Defined within the project boundary

Emissions reduction rates are calculated from these two factors. These rates are decimal values, so the minimum number of acres can be anywhere from the thousands to tens of thousands to create a viable project.

Project Steps

Stage 1: Feasibility (3 months)

- Carbon and Timber demands

Stage 2: Inventory, quantification, growth and yield modeling, harvest schedule, reporting (9 months)

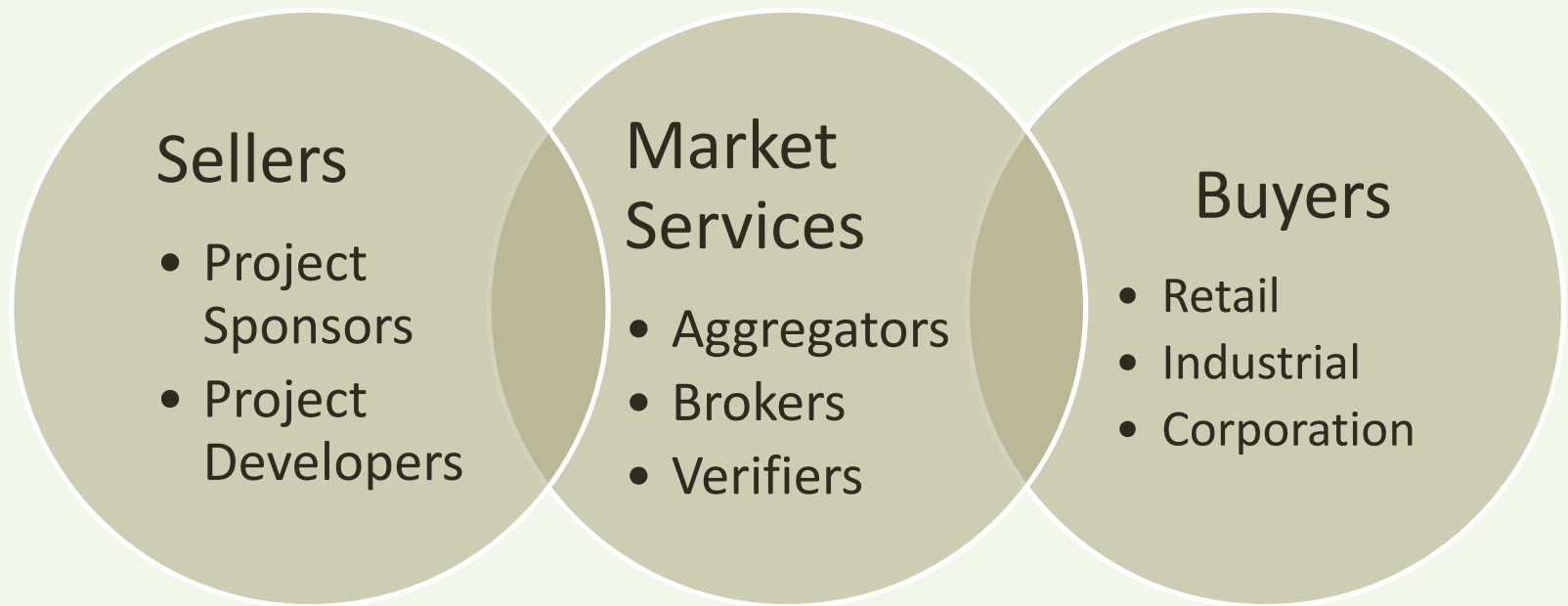
Stage 3: Verification & registry review (6-9 months)

Stage 4: Credit sale (occurs during development)

Stage 5: Monitoring, Reporting and Verification (40 /100+ years) and capacity building

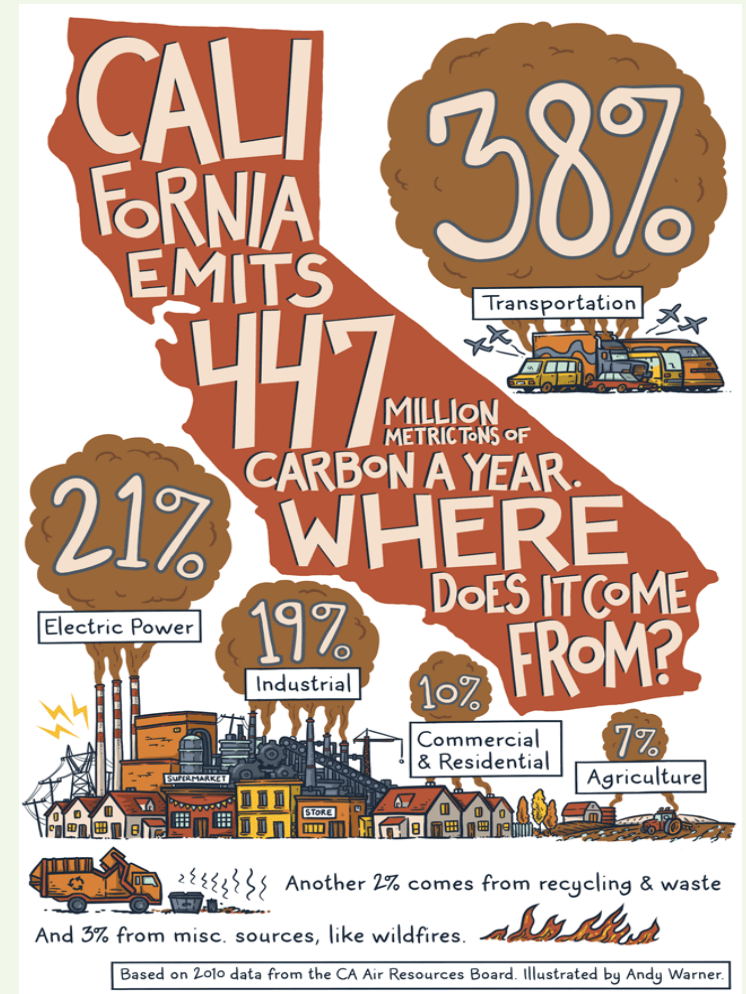
Carbon Markets

- Voluntary
 - International Air Transport Association
 - Social Responsible Corporations (Google, Microsoft, Best Buy)
- Compliant
 - California Cap and Trade
 - Ontario, CA Cap and Trade



California Cap and Trade Program

- This market-based form of regulation sets a **'cap'** or upper limit on the amount of carbon emissions that a company may legally produce.
- It then enables those companies who are producing more than the allowable amount to purchase or **'trade'** for additional capacity from organizations that have not used their full allowance or have created carbon offset projects.



California Cap and Trade Program

- Tribal Projects
 - Yurok Tribe
 - Round Valley Indian Tribes
 - White Mountain Apache
 - Passamaquoddy Tribe
 - Confederated Tribes of Warm Springs
 - The Confederated Tribes of the Colville Reservation
 - Mescalero Apache Tribe
 - Chugach Alaska Corporation

Voluntary Carbon Market

- Participants purchase emissions reductions for public relations or personal reasons. Buyers and sellers engage in transactions on a voluntary basis.
- Generally buyers are businesses or individuals engaging for philanthropy, risk management, and/or in preparation for participation in a regulatory market.
- Pricing per credit in this market fluctuates considerably

Voluntary Carbon Market

- The VERRA Climate, Community & Biodiversity (CCB) Standards identify projects that simultaneously address climate change, support local communities and smallholders, and conserve biodiversity.



Voluntary Carbon Market

- The CCB Program promotes excellence and innovation from the earliest stages of project design and development through implementation. CCB Standards criteria ensure that projects:
 - Identify all stakeholders and ensure their full and effective participation
 - Recognize and respect customary and statutory rights
 - Obtain free, prior and informed consent
 - Assess and monitor direct and indirect costs, benefits and risks
 - Identify and maintain high conservation values
 - Demonstrate net positive climate, community and biodiversity benefits



Positives vs. Negatives – Carbon Project

- **Positives**

- Potential for revenue generation
- Complements BIA Integrated Resource Management Plan practices
- Steward of the land

Positives vs. Negatives – Carbon Project

- **Negatives**

- Duration of project (up to 100 years)
- Requires a Limited Waiver of Sovereign Immunity
- Time commitment from tribal staff
- Restrictions on land use (cannot develop housing, commercial enterprises, gaming)
- Natural disasters

Current NICC Projects

- **Lower Brule Sioux Tribe** – 11,000 acre project utilizing the Avoiding Conversion of Grassland to Cropland methodology
- **Fond Du Lac Band of Lake Superior Chippewa** – 9,900 acre project utilizing the Improve Forest Management methodology
- **Leech Lake Band of Ojibwe** – 16,900 acre project utilizing the Improve Forest Management methodology
- **Keweenaw Bay Indian Community** – 17,000 acre project utilizing the Improve Forest Management methodology
- **Koda Energy** (51% Shakopee Mdewakanton Sioux Community owned) - Thermal Energy Production with or without Electricity

A Joint Project

National Indian Carbon Coalition is a joint project of Indian Land Tenure Foundation and Intertribal Agriculture Council.



Indian Land Tenure
FOUNDATION®



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