

THE ENERGY, CLIMATE, & CONSERVATION TASK FORCE

Member Lead: Rep. Garret Graves (R-LA)

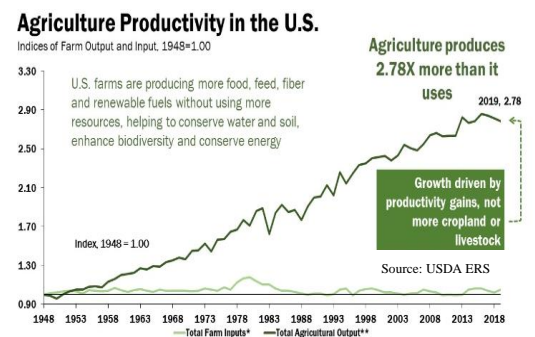
CONSERVATION WITH A PURPOSE

"In the last 10 years, the emissions reduction in the United States has been the largest in the history of energy...this is a huge decline of emissions." – Dr. Fatih Birol, International Energy Agency Executive Director (February 28, 2019)

The U.S. is among the most carbon efficient producers in the world. While other nations have sought to constrain through government mandates, taxes, and regulations to address their emissions, the U.S. should continue to increase efficient production and supply the world with affordable resources and goods to reduce global emissions. With a proven track record of abundant crop yields, successful land conservation programs, and deployments of innovative solutions, America's farmers and ranchers are the most productive and efficient in the world. In addition, properly managed forests and lands play a key role in reducing atmospheric carbon and provide clean air, clean water, and wildlife habitat. We need to capitalize on our American advantage, utilize American resources, and double down on innovation to continue to increase efficiency and lower the emissions profile of our resources even further – helping to supply global demand while lowering global emissions and boosting our economy.

TOPLINE FACTS:

- The U.S. has been the world leader in lowering carbon emissions while China is the world's largest emitter, producing more annual carbon dioxide emissions than almost all OECD nations combined.¹
- The U.S. is the world's most efficient producer of agriculture. American farmers, ranchers, and producers' outputs are nearly 300% above the production levels in the 1940s.²
- Total global food demand is expected to increase by up to 56% by 2050.³
- As a percentage of total greenhouse gas emissions, agricultural emissions represented only 10% of all U.S. emissions in 2020⁴ - with beef making up just 3.3% of all U.S. emissions.⁵
- Per unit livestock emissions have decreased over the last 70 years by 21% in pork, 26% in milk, 11% in beef.⁶
- Since 1990, the U.S. Land Use, Land-Use Change, and Forestry (LULUCF) Sector has been a net sink source of emissions. In 2020, the LULUCF removed 13% of total greenhouse gas emissions from the atmosphere, completely offsetting all greenhouse gas emissions from agriculture processes.⁷
- American farmers are proactively and voluntarily planting more cover crops, implementing diverse crop rotations, and using more conservation tillage methods. Since 2012, sustainable soil use and resource conservation efforts increased by 34M acres, or 17%.⁸
- The total acres U.S. farmers have enrolled in certain USDA conservation programs is equal to the total land area of California and New York (this does not include voluntary or state-led conservation programs).⁹
- Young trees remove carbon from the atmosphere at a faster rate than older trees; a managed forest with young trees has storage and sequestration benefits while preventing wildfires and related emissions.¹⁰
- Restoring 1 trillion new trees globally would sequester 205 gigatons of carbon, an amount equivalent to two-thirds of all manmade emissions remaining in the atmosphere today.¹¹ This is also equivalent to all of the emissions released as a result of global deforestation from 1850 to 2018.¹²
- Demand for plastics has almost doubled since 2000 and has outpaced that of all other bulk materials (i.e., steel, aluminum, cement).¹³
- About 88-95% of all river-borne plastic in the ocean comes from just 10 rivers – eight in Asia, mostly of Chinese-origin.¹⁴ The two additional rivers are in Africa.
- The use of lithium-ion batteries will increase with the growth in demand for consumer electronics, electric vehicles, and energy storage – but relatively few lithium-ion batteries end up being recycled.¹⁵



¹ <https://www.globalcarbonatlas.org/en/CO2-emissions>

² <https://www.ers.usda.gov/data-products/agricultural-productivity-in-the-us/agricultural-productivity-in-the-us/>

³ <https://realizeweb.int/report/world/food-outlook-biannual-report-global-food-markets-november-2021>

⁴ <https://www.fb.org/land/fst>

⁵ <https://www.ars.usda.gov/news-events/news/research-news/2019/study-clarifies-us-beefs-resource-use-and-greenhouse-gas-emissions/>

⁶ <https://www.fb.org/newsroom/americas-farmers-are-reducing-greenhouse-gas-emissions>

⁷ <https://www.epa.gov/climateemissions/sources-greenhouse-gas-emissions#land-use-and-forestry>

⁸ <https://unitedsoils.com/wp-content/uploads/2019/05/FFASF-Sustainable-Flyer.pdf>

⁹ <https://www.fb.org/land/fst>

¹⁰ https://www.ncasi.org/wp-content/uploads/2021/01/NCASI22_Forest_Carbon_YoungVsOld_print.pdf

¹¹ <https://www.science.org/doi/10.1126/science.aax0848>

¹² <https://essd.copernicus.org/articles/11/1783/2019/#section3>

¹³ <https://www.iea.org/reports/the-future-of-petrochemicals>

¹⁴ <https://www.weforum.org/agenda/2018/06/90-of-plastic-polluting-our-oceans-comes-from-just-10-rivers/>

¹⁵ <https://cnp.acs.org/materials/energy-storage/time-serious-recycling-lithium/97/28#~:text=Challenges%20in%20recycling%20the%20economics%20of%20recycling,>

THE ENERGY, CLIMATE, & CONSERVATION TASK FORCE

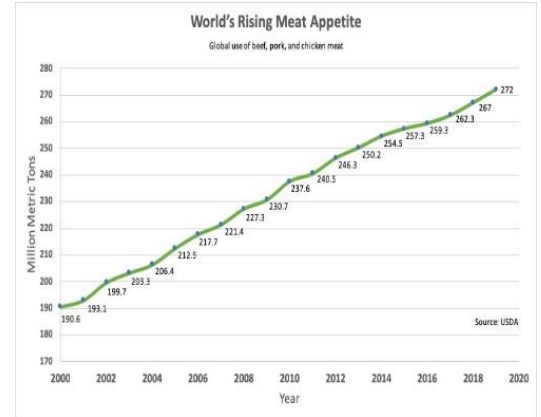
Member Lead: Rep. Garret Graves (R-LA)

AMERICAN AGRICULTURE IS THE MOST EFFICIENT IN THE WORLD

- Not only are farmers conserving resources, they are doing it while producing more food, feed, and fiber.
- U.S. agriculture would have needed nearly 100M more acres in 1990 to match 2018 production levels.¹⁶
- Production of U.S. beef has improved significantly in the last 40 years with a lower GHG profile. If demand is expected to increase and we constrain U.S. farmers and ranchers, it will lead to an increase in global emissions. U.S. ranchers are producing the same amount of beef today as they did in 1977 with 33% fewer animals.¹⁷
- Between 2007 and 2017, dairy producers reduced GHG emissions by 19%, land use by 21%, and water use by 30%.¹⁸

CAPITALIZE ON AND GROW THE AMERICAN ADVANTAGE

- Productivity growth driven by increased use of crop protection tools, fertilizers, and animal health supplements has helped reduce greenhouse gas emissions, improve soil health, increase crop yields, and improve animal productivity.
- Precision agriculture helps determine which fertilizer is best for current soil conditions and where exactly on the field it needs to be applied. This allows farmers to know the exact amounts required, saving money and lowering emissions.
- We need to capitalize on our American advantage, utilize American resources and double down on innovation to continue to increase efficiency and lower the emissions profile of our resources even further – helping to supply global demand while lowering global emissions and contributing to local economies.



INCREASE GLOBAL FOOD SECURITY WITH U.S. PRODUCTION

- Along with rising energy prices and inflation, the crisis in Ukraine has led to another crisis related to the global food supply. It has been reported that since Russia's invasion of Ukraine, wheat prices have increased 21%, barley by 33%, and fertilizers by 40%.¹⁹ These shortages – and Russia's aggression in Ukraine – could cause up to 13.1M people to go hungry.²⁰
- The Food and Agriculture Organization of the United Nations predicts that by 2050, around the world, "agriculture will need to produce almost 50 percent more food, fiber, and biofuel than in 2012."²¹ U.S. farmers should supply that demand.

NATURAL SOLUTIONS TO REDUCE GLOBAL EMISSIONS

- Despite improvements in technology, trees are still the most large-scale, cost-effective, and environmentally friendly carbon sequestration devices available.
- The U.S. can build on its success in reducing global emissions by planting trees around the world and better managing forests.
- There are currently 3.04 trillion trees globally.²² Some estimate that "the global number of trees has fallen by approximately 46% since the start of human civilization."²³
- Between 1850-2015, North America lost 111M hectares of forest. Globally, 828M hectares of forest were lost.²⁴
- The United States contains 8 percent of the world's forests across, totaling 766M acres (about a third of the Nation's land area), including 238M acres of Federal forests.²⁵
- On average each year, agencies in the U.S. Department of the Interior alone plant approximately 20M trees to reforest public lands or establish new forests.²⁶
- Unfortunately, the U.S. Forest Service currently has a reforestation backlog of approximately 1.3M acres and is currently addressing less than 5 percent of its reforestation needs annually.²⁷
- Without further action the world could lose roughly 223M hectares of forest by 2050, which would release approximately 46 gigatons of carbon.²⁸

¹⁶ <https://www.fb.org/land/fsf>

¹⁷ <https://www.kansasbeef.org/one-simple-ingredient/beef-sustainability#:~:text=When%20it%20comes%20to%20productivity,8%25%20of%20the%20world's%20cattle.footprint#:~:text=However%2C%20the%20dairy%20industry%20has%20improved%20its%20footprint,to%20research%20in%20the%20journal%20of%20Animal%20Science.>

¹⁸ <https://news.cornell.edu/stories/2021/07/10m-grant-funds-study-dairys-carbon-footprint#:~:text=However%2C%20the%20dairy%20industry%20has%20improved%20its%20footprint,to%20research%20in%20the%20journal%20of%20Animal%20Science.>

¹⁹ <https://www.nytimes.com/2022/03/20/world/americas/ukraine-war-global-food-crisis.html>

²⁰ [ibid.](https://www.nytimes.com/2022/03/20/world/americas/ukraine-war-global-food-crisis.html)

²¹ <https://www.fao.org/3/cb7654en/online/src/html/chapter-3-2.html>

²² <https://www.nature.com/articles/nature14967>

²³ [ibid.](https://www.nature.com/articles/nature14967)

²⁴ [ibid.](https://www.fao.org/3/cb7654en/online/src/html/chapter-3-2.html) "Global and Regional Fluxes of Carbon from Land Use and Land Cover Change 1850-2015."

²⁵ <https://www.fs.usda.gov/sites/default/files/1TrillionTrees.pdf>

²⁶ <https://www.fs.usda.gov/sites/default/files/1TrillionTrees.pdf>

²⁷ Data provided by the U.S. Forest Service.

²⁸ <https://science.sciencemag.org/content/365/6448/76>

THE ENERGY, CLIMATE, & CONSERVATION TASK FORCE

Member Lead: Rep. Garret Graves (R-LA)

Examples of Republican Solutions:

[H.R. 8069](#), (Rep. Glenn Thompson), *“Reducing Farm Input Costs and Barriers to Domestic Production Act”*
[Full Congress.gov summary](#)

This bill requires the Biden Administration to reverse its regulatory barriers to domestic agriculture production and provide immediate relief to families across the country.

[H.R. 2639](#), (Rep. Westerman), *“Trillion Trees Act”*
[Full Congress.gov summary](#)

This bill promotes planting and growing more trees to pull carbon from the atmosphere around the world, scientifically managing forests to mitigate catastrophic wildfires, and incentivizing the use of wood products as renewable resources.

[H.R. 2518](#), (Rep. Hinson), *“Producing Responsible Energy and Conservation Incentives and Solutions for the Environment (PRECISE) Act”*
[Full Congress.gov summary](#)

This bill will help ensure that farmers around the country have access to updated precision agriculture technology and the rural broadband connectivity to support it. Expanding affordable precision agriculture technologies will help increase crop yields, improve distribution, reduce costs, avoid soil degradation, and lower carbon emissions at the same time.

[H.R. 2581](#), (Rep. Herrell), *“Biochar Innovations and Opportunities for Conservation, Health, and Advancements in Research (BIOCHAR) Act of 2021”*
[Full Congress.gov summary](#)

This bill creates new demonstration projects for biochar to speed the commercialization of relevant technologies, as well as new applied research and development programs to test its applicability in a variety of sectors outside the energy field.

Biochar is an emerging carbon sequestration tool with potential to sequester carbon for hundreds of years. Utilizing biochar, which is produced by burning biomass in the absence of oxygen, also has many other environmental benefits ranging from improved forest health and resiliency, agricultural productivity, environmental remediation, water quality improvement and retention, and improved soil health.

[H.R. 2777](#), (Rep. Anthony Gonzalez), *“Advanced Recycling Research and Development Act of 2021”*
[Full Congress.gov summary](#)

This bill will help accelerate innovation in plastics and battery recycling, reduce the environmental impact of their consumption, and increase the economic value and security of domestic resources and supply chains.

This includes developing new sorting and collection techniques, methods for deconstructing waste, and innovative new technologies and plastics composites. The battery program will support the development of technologies to reclaim and recycle materials from lithium-based battery technologies currently used in consumer electronics, defense, storage, and transportation. It will also help promote the discovery of new environmentally friendly materials that can be used for batteries, innovate a cost-effective process for the collection of discarded lithium-based batteries, and develop a cost-effective recycling process to recover critical materials found in lithium-based batteries.

THE ENERGY, CLIMATE, & CONSERVATION TASK FORCE

Member Lead: Rep. Garret Graves (R-LA)

[H.R. 8337](#), (Rep. Lucas), “*Carbon Sequestration Collaboration Act*”
[Full Congress.gov summary](#)

This bill will address knowledge gaps and improve the U.S.’ ability to sequester carbon in terrestrial ecosystems and through land use like agriculture and forestry. Approaches that enhance carbon uptake and storage in agricultural soils have many positive benefits, including increased productivity, water holding capacity, stability of yields, and nitrogen-use efficiency. Increased carbon sequestration can also help regeneration of cultivated soils across the country, which are estimated to have lost 50–70% of their original organic carbon over time.

[H.R. 2606](#), (Rep. Glenn Thompson), “*Sponsoring USDA Sustainability Targets in Agriculture to Incentivize Natural Solutions (SUSTAINS) Act*”
[Full Congress.gov summary](#)

This legislation provides an opportunity for the private sector to partner with USDA to engage farmers and ranchers in supporting conservation initiatives, including to expand land use practices to sequester carbon, improve wildlife habitat, protect sources of drinking water, and address other natural resource priorities. Key provisions include the ability for USDA to match private sector investments and for the contributor to work with USDA to decide which natural resource concerns they want to address.