

**Testimony of  
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On behalf of  
Methane Action and Remineralize the Earth  
For The  
Subcommittee on State, Foreign Operations, and Related Programs  
Regarding Operations of State, USAID, Treasury, and other agencies for FY23**

**On Developing Methods and Governance for Removing  
Substantial Amounts of Methane and other Greenhouse Gases**

June 30, 2022 11:32 a.m.

Chairman Coons, and Members of the Subcommittee: Last year, the world-renowned former science advisor to the U.K., Sir David King of Cambridge University, declared we have five years left to solve the climate crisis and announced a new Climate Crisis Advisory Group to help reduce emissions, remove greenhouse gases already emitted and restore the climate to truly healthy temperatures and functioning.<sup>1</sup> This year former WTO Director General, Pascal Lamy, formed an Overshoot Commission with science advisors to develop plans to address the expected overshoot of the Paris targets and to propose governance for climate interventions. (<https://www.overshootcommission.org/commission>)

In April 2021, Sir David, Michael Mann of Penn State and Rob Jackson of Stanford led a group of scientists from the U.S., Canada, U.K., Europe and Japan in signing a letter in advance of the White House Climate Summit declaring that governments need to expedite 1) the reduction of emissions, 2) the deployment of methods of removing excess ambient methane and other greenhouse gases (GHGs) from the atmosphere and 3) the development of governance capable of ensuring the safe and effective use of those methods.<sup>2</sup> Since then more scientific and policy experts have called for a Methane Declaration or Agreement<sup>3</sup> and over 100 nations have signed the Methane Pledge to reduce by 30% human caused methane emissions by 2030.

Our testimony focuses primarily on how this Subcommittee can help prepare the U.S. and its allies to develop the global governance called for by those scientists whose research is bringing to bear potential solutions unlike any deployed so far. Peer reviewed science and ongoing laboratory tests indicate that they and their colleagues may be able to deploy safe and efficient methods that can return and sustain methane levels from the current concentrations of 1.94 parts per billion (ppb) to the pre-industrial norm of 0.7- 0.8 ppb sometime between 2036 and 2050.

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<sup>1</sup> See, <https://www.businessgreen.com/news/4033355/reduce-remove-repair-climate-crisis-advisory-group-sketches-climate-priorities>.

<sup>2</sup> (See, MethaneAction.org).

<sup>3</sup> There are drafts of each at MethaneAction.org.

Achieving this goal would be game-changing, shaving peak temperatures by an additional .4 degrees C by 2050 and 1 degree C by 2100, while allowing us to scale up carbon dioxide removal and drawdown. To most effectively ensure that these methods of methane removal are assessed and deployed promptly and fully requires only modest government support and direction. You and your colleagues on the Interior and Energy Subcommittees can provide that in the FY23 appropriations process.

Last year the United Kingdom announced 23 new major grants to U.K. entities to develop new CO<sub>2</sub> and methane removal technologies. Those grants were based on earlier submissions and did not appear to cover the latest and most promising methane removal approaches. To date, and to our knowledge, only one U.S. sponsored methane removal research project has been funded and that is to M.I.T. to develop just one of the many approaches under development at universities across the country and around the world. The U.S. must step up and play a leadership role in the research, development, assessment, governance and deployment of an array of GHG removal methods such as methane removal, enhanced rock weathering (ERW), reforestation and regenerative agriculture to increase soil health and GHG drawdown.

We filed complementary testimony with the Interior-EPA Subcommittee and the Energy and Water Subcommittee urging them to establish an interagency Climate Restoration Program supported by specific grants, contracts, and policies. We ask that you work with those subcommittees to ensure the overall program supports and extends the goals of the Global Methane Pledge into an effective international Methane Declaration or a broader Agreement for Climate Restoration covering all emerging and promising forms of greenhouse gas removal.

One year ago, the European Commission proposed its border adjustment on imports that would impose a tariff on goods imported into the EU made with processes resulting in greenhouse gas emissions in excess of the rate allowed in the EU. Current international trade and environmental law that the U.S. helped establish provides that nations should not harm the environment nor health of other nations and that they have the right to support their domestic industries and populations by embargoing or tariffing imports from countries that do not require comparable performance if such measures are also in support of existing international conservation agreements.<sup>4</sup>

We urge you to work with your colleagues to support efforts to use existing law and reject any limitation on the use of current law to deploy, pay for, or require the reduction and removal of such pollutants. We urge you, and the Congress as a whole, to enact such legislation and take any steps necessary to overcome unexpected limitations placed by the courts upon the authorities and duties you have given the agencies to accomplish that both here and abroad. As President Biden stated, climate change is an existential threat to us all. At just 1.1 degrees Celsius over preindustrial temperatures, we see record heat, floods, fire and smoke. A rise in temperatures of an additional .4 degrees or more, which some scientists expect to occur this decade, could be catastrophic. When the Paris Agreement was

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<sup>4</sup> (See, Shrimp and Sea Turtle Appellate Decisions of the WTO.)

drafted in 2015, and the world agreed to do all it could to avoid a rise in temperatures in excess of 1.5 C, the world did not have methane removal at scale in its sites. We do now. If we act swiftly, upholding both the terms of the Global Methane Pledge, which will help us avoid about .2 C of additional warming, and scale up the research, development and governance of methane removal, which will shave an additional .4 C of warming, we could shave peak temperatures by .6 C by 2050 from action on methane alone.

*The legislative and report language we recommend for your bill:*

**I. Integrate Greenhouse Gas Removal In Policies and Programs.** In order to reduce greenhouse gases and other climate forcing agents (GHGs) to historically healthy levels as soon as possible, the Secretaries of State and Treasury, the Administrator of USAID, the Chief Executive Officers of the Millennium Challenge Corporation, the Trade and Development Agency, the U.S. International Development Finance Corporation and the Export Import Bank, and the other agencies using funds appropriated in this bill, and using their voice and votes and leadership accordingly in the International Financial Institutions including, but not limited to, the World Bank Group, the IMF, the Strategic Climate Fund and the Global Environment Facility, shall:

A) In consultation and cooperation with the Special Envoy and Domestic Advisor on Climate Change, the Administrator of the EPA, and the appropriate departments and agencies, use their authorities to facilitate the deployment of methods of limiting emissions of, and removing from the atmosphere methane, carbon dioxide and other greenhouse gases, and black carbon (or "soot") (hereinafter "GHGs"); incorporate such methods in their actions, including but not limited to their foreign assistance, intergovernmental cooperation, international finance programs, and bilateral and international trade and other negotiations; and

B) Report to the Committees of jurisdiction and the public on the plans for, and progress in so doing, within 60 days of enactment and annually thereafter.

**II. Ensure Global Governance of GHG removal.** Beginning no later than thirty days after the date of enactment and continuing thereafter, the Secretary of State and the Administrator of USAID, in consultation with the Administrator of the EPA, the Special Envoy for Climate Change, the US Trade Representative, and other relevant agency heads, shall propose and pursue a Methane Declaration or Agreement:

a) Supporting the proper assessment, deployment and governance of methods of reducing the atmospheric presence of methane and other GHGs including but not limited to enhanced atmospheric methane oxidation via photocatalysis, zeolite and other adsorption technologies, atmospheric radicals, and methanotrophic conversion, to historic healthy levels; and

b) Actively removing methane and other GHGs from the atmosphere, both near sources and from the ambient atmosphere at scales that substantially reduce methane and to the extent possible other short lived climate pollutants, within or apart from existing international agreements in a manner that is complementary to their objectives, and does not preempt other conservation and restoration efforts or the powers of jurisdictions to adopt stricter measures. There is appropriated for the above in FY23: **\$12,000,000.**

**III. Assist Developing Countries with Win-Win Methane Reduction and Removal.** In cooperation with USDA and its agencies such as agencies, such as the USDA Office and International Research, Engagement and Cooperation, the Administrator of USAID, shall contract for an evaluation of GHG sequestration, uptake, oxidation and other long-term removal methods in agricultural and silvicultural practice (forestry), including, but not limited to, the methods described below:

**a) Rice:** With a goal of cutting methane emissions from rice cultivation in half, the Administrator of USAID shall contract in FY23 for a three year test of the impact of various potential additives to rice farming, including but not limited to iron sulfates, approved for organic farming to enhance yields, fight plant chlorosis, and improve the nutritional value of rice crops by enhancing their iron levels in order to fight anemia, in conjunction with other changes in rice farming practice such as targeting the flooding of fields more efficiently. (Research indicates that similar organic iron fertilization may be beneficial to forests as well.) The production of rice, a basic staple for nearly half the world population, produces about 8% of global methane emissions and 2.5% of radiative forcing, and these numbers are expected to double by 2100. **\$3,000,000**

**b) Livestock** - Methods of reducing the emissions of methane from cows, sheep and other livestock range from adding food supplements made of red seaweed (US) to planting native plants that reduce methane generation in sheep that graze on those plants (France). Active methane removal from livestock barns is soon to be tested in Denmark using a method that may also be effective when deployed at the mouths of coalmines. USAID shall lead a broad livestock methane reduction and removal research, development and demonstration program. **\$4,000,000**

**c) Methane mitigation via wetlands management.**

Wetlands are a major source of methane emissions, especially as they warm in the global south making up 31% of total methane emissions. The Administrator of the USAID in cooperation with the Secretary of State and the Administrator of the EPA shall investigate and implement a program to reduce wetland and peat bog emissions of methane via restoration and alternative management practices, e.g., re-wetting drained wetlands, and restoring natural ecosystem functions. **\$1,500,000**

**d) Coal, Oil, Gas, and Waste Related Methane Mitigation and Removal.** Active and abandoned coal mines and oil and gas production and transmission as well as landfills, dams and sewage treatment emit massive amounts of methane, especially in regions beyond the U.S. and the E.U., that could easily be reduced and removed using known methods and those coming into use in the near term given additional support. This would also result in lower levels of ground level ozone with many health benefits. The Secretary of State and the Administrator of USAID, in cooperation with the EPA, the DOE, and the relevant offices of the E.U., the United Nations, and International Financial Institutions, shall develop and deploy task forces to assist countries in reducing and removing the emissions of methane and other GHGs. **For the State Department: \$ 5,000,000--For the USAID: \$20,000,000**

**Report:** The Committee expects a report from the Secretary and the Administrator on progress in developing an international declaration or agreement on the removal

of Greenhouse Gases and on the assessment and implementation of removal methods within three months of the date of enactment and annually thereafter.