

# A Georgist Approach to Emissions Rights

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Climate change is one of the most important problems of our time. One of the most important aspects of this problem is determining who should bear its costs. Climate change is, among other things, a problem of distributive justice.

My aim in this essay is to sketch a view about how to distribute the costs of climate change. This approach will consist of two claims: one analytical and the other normative. The analytical claim is that we should think about the atmosphere—specifically, its ability to absorb greenhouse gasses—as a scarce natural resource that commands an economic rent. The normative claim is that we should use Georgist (rather than Lockean) principles to distribute this economic rent. In *Progress and Poverty*, Henry George wrote: “The equal right of all men to the use of land is as clear as their equal right to breathe the air—it is a right proclaimed by the fact of their existence. For we cannot suppose that some men have a right to be in this world and others no right.”<sup>1</sup> Following George, the cornerstone of my view is that all people have an equal right to use the atmosphere.

## Analytical claim: The atmosphere as a scarce resource

Humanity has been turning biomass into usable energy for a very long time. Like other animal species, we eat plants and meat and turn them into calories, even storing some for later as fat. But about a million years ago, humans started to use woodburning for other purposes, like cooking food, keeping warm, and eventually, for manufacturing useful tools. Burning wood emits carbon into the atmosphere, just like burning fossil fuels. At first, the human population was so small, and it used so little energy per capita, that the atmosphere could easily absorb the carbon we emitted.

Fast forward to the dawn of the industrial revolution, when the human population was much larger, and big portions of it started harnessing fossil fuels—mostly coal in England and the Eastern USA—for industrialization. Here there was a step change in

the amount of carbon humanity emitted. At first, the atmosphere still retained the capacity to absorb the amount of carbon that was emitted.

But sometime later, perhaps in the mid-20th century, the human population had grown larger, more people were using fossil fuels for industrial applications, and the use of this energy per capita had grown too. The atmosphere’s capacity for safely absorbing the carbon we emitted had been exhausted. But humanity kept emitting, and increasing its emissions every year. Some now think that humanity’s emissions have finally peaked.

Let’s suppose that the turning point happened around 1950. Before this turning point, burning fossil fuels had no adverse impacts on the atmospheric commons. After about 1950, burning fossil fuels began to have adverse impacts on the atmospheric commons. Before 1950, humans could all freely use the common pool resource of the atmosphere’s ability to absorb greenhouse gas emissions. But after 1950, there was not enough of this resource to satisfy everyone’s desire to use it. The resource became scarce. Compare this situation to our use of another natural resource: land. Originally, there was ample land for everyone to farm on. But eventually, all of the best land was claimed and there was not enough good land to satisfy everyone’s desire to use it. Land became a scarce resource.

There are some dissimilarities between land and the atmosphere. Land is an *excludable* resource, but the atmosphere normally isn’t. I can put up a fence around a portion of land that I use or claim to keep other people out, while it isn’t possible for an individual to exclude others from using specific portions of the atmosphere. But both resources are *rivalrous*, meaning that one person’s use of the resource depletes the quantity or quality available to other users.

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1 Henry George, *Progress and Poverty*, p.300

All rivalrous resources are scarce but only natural resources are absolutely scarce. Ordinary consumer goods like beds are relatively scarce because you have to pay for them—they aren't available for free. But the supply of consumer goods can change in response to changes in demand. Natural resources are absolutely scarce because their supply is fixed independent of any human actions. Therefore, if demand for natural resources increases—as demand for the use of polluting fossil fuels has over the last several centuries—then their price increases.

The absolute scarcity of natural resources is the reason why they command an economic rent, a long-run income above the minimum required to produce them. When landowners receive a “rental” payment from tenants, the economic rent is the portion of the payment for the use of land, separate from the portions for the use of labor (e.g. maintenance) or buildings. Landowners can also collect imputed economic rent as owner-occupiers. As simultaneous owners and users of land, they benefit from free use of an absolutely scarce resource.

The atmosphere also commands an economic rent, since it is absolutely scarce. Since the atmosphere is not excludable, this economic rent is collected implicitly by the current users of the atmosphere, who use a scarce resource for free. But it is future generations who pay this rent: they will suffer from the adverse impact on the atmospheric commons caused by present and past economic activity. In other words, people who burn fossil fuels today benefit from the fact that a negative externality of their behavior is not priced, which harms future generations.<sup>2</sup>

### **Normative claim: The just distribution of atmospheric rents**

We have just established that the atmosphere's capacity to absorb greenhouse gasses is an absolutely scarce resource that commands an economic rent. Currently, people who emit greenhouse gasses by burning fossil fuels collect this economic rent because most countries do not impose carbon taxes and the countries that do set them too low. Instead of making the people who use fossil fuels today pay the economic rent for the resource they use, society has chosen to defer the payment of the rent to future generations, who will pay it in the form of resource

depletion, environmental damage, forced migration, natural disasters, property damage, and the other harms that climate change will cause. Members of the present generation, in proportion to how much they choose to emit, receive this rent paid by future generations in the form of economic surplus that is subsidized by the degradation of natural resources.

International climate negotiations aim to gradually shift the economic burden from future generations to the present generation, by raising the cost of emitting. This is what distributive justice requires, since we have no right to soil the prospects of future generations. Hence, our question is how this rent should be distributed among members of the present generation.

Broadly speaking, there are two prominent approaches for how to distribute natural resource rents, exemplified in the works of John Locke and Henry George. Locke's approach is to assign a natural resource rent to the person who first uses the resource by “mixing their labor” with it. George's approach is to socialize the natural resource rents and let everyone in the community have an equal share of them. Which approach should we use to distribute rights to emit greenhouse gasses among members of the present generation?

Luc Bovens (2011) develops a Lockean account of how to distribute emissions rights. The idea is that Western countries, like the UK and USA, should have more emissions rights in virtue of the fact that they have been emitting large amounts for a long time. By starting to farm on a piece of land, you “mix your labor” with that land and hence become entitled to its future economic rents and to continue to use it. Here, by burning fossil fuels for some economic purpose, you “mix your labor” with the atmosphere and hence become entitled to the future economic rents commanded by that portion of the atmosphere's absorption capacity, and entitled to continue to use it by burning more fossil fuels in subsequent periods. In both cases, being the first to use a resource for a productive purpose gives you an entitlement to that resource's economic rents.

The Lockean approach would have emissions rights distributed to countries corresponding to how much they emitted when humanity's emissions first exceeded the atmosphere's ability to absorb them—1950, as we are supposing here. This proposal would

2 Ecological economists sometimes use the concept of natural capital to discuss these issues. Present generations are depleting natural capital at the expense of future generations who will have less.



assign almost all of the emissions rights to Western Europe and the United States. If a cap-and-trade system were implemented, then other countries could buy emissions permits from the Western countries who gained an original title to them by emitting first.

A Georgist proposal for distributing emissions rights would look quite different. Georgists deny that one can do anything to gain an entitlement to use a natural resource in perpetuity, or an entitlement to its economic rents. "Mixing your labor" gives you a right to the value that your labor adds to the natural resource, but does not give you a right to the resource's economic rent, because this rent was not created by your labor. As such, Georgists think that natural resource rents should not be allocated to whoever happened to productively use the resource first. Rather, Georgists think that natural resource rents should be distributed equally to everyone in the community. This is because no person created natural resources, and we all have an equal right to use them.

How would a Georgist cap and trade system function in practice? First, a global carbon budget would be set each year. The budget would be less than we currently use, and would decline each year until we eventually reach net zero. How quickly the global carbon budget shrinks represents how quickly we transfer liability to pay the atmosphere's rent to present generations from future generations. Rights to emit greenhouse gases would be distributed equally among all people. And a global carbon market would be established to allow trading of emissions rights. The price of emissions rights would be modest at first but would grow as the global carbon budget shrinks.

Under a Georgist cap and trade system, people in the global south would sell their permits to people in the global north, because people in the global south do not use as much energy as people in the global north. Resources would flow from north to south as permits flowed from south to north. A Lockean cap and trade system would initially allocate most emissions permits to people living in the global north, where most of the permits would ultimately be used. But as the global south develops and industrializes, global south countries would have to purchase rights to emit carbon from the global north. Permits would flow from north to south as resources flowed from south to north. The Lockean system is just the opposite of what justice requires. People in the global south do not need to buy permission to develop from people in the global north, but rather, people in the global north

need to buy permission to continue to use so many fossil fuels from people in the global south.

To put some numbers on things: the world's average CO<sub>2</sub> per capita emissions in 2022 was 4.84 tons. The US emits 14.44 tons per person, France emits 4.76 tons per person, Brazil emits 2.15 tons per person and India emits 1.91 tons per person and almost every country in Sub-Saharan Africa emits less than 1 ton per person. In the first year that the Georgist cap-and-trade system is implemented, each person would be assigned, let's say, 4.5 tons. The average person in Sub-Saharan Africa would have 3.5–4 more tons of permits than they need, and the average American would need to buy about 10 tons of permits on the carbon market or reduce their emissions. The cost of emissions permits would be determined by supply and demand in the marketplace, but it would rise over time, eventually equaling the social cost of carbon. Probably the initial cost would be between \$25 and \$100 per ton, let's say \$50. This would mean that Americans would start by paying, on average, \$500 for the carbon that we use every year—we would get 4.5 tons for free, but would have to pay for the other 10 tons that we use. Each year, the amount that we get for free would have to decrease slightly, and so the amount we would have to pay for our fossil fuel dependent lifestyles would increase slightly, perhaps by about 10% per year. What's more, each person in Sub-Saharan Africa would receive between \$150 and \$200 from selling their emissions permits to Americans, which would be a much-needed step to advance economic development and alleviate poverty on that continent.

The Georgist cap-and-trade system would also present an effective compromise between the interests of developed and developing countries in international climate negotiations. Developing countries usually argue that developed countries should assume more of the burden because they already burned a lot of carbon, which helped them get rich in the first place. The flaw in this argument is that most of the industrialization and development took place before the atmosphere became a scarce resource, so this development did not come at a cost to global south countries. Developed countries usually argue that they owe some assistance to developing countries in helping them develop in a green way, but the assistance they offer often falls short of distributing emissions rights equally. Developing countries should not get more than their equal share of emissions rights because developed countries

burned fossil fuels well before the atmosphere became a scarce resource. But neither should developed countries get more than their equal share of emissions rights because they have been emitting for a longer period of time. Everyone should get the same emissions rights, because everyone is an equal owner of the atmosphere.

Economists will point out that a cap-and-trade system is economically efficient no matter how the emissions permits are initially distributed, as long as the market works well and there are low transaction costs. And they are right about this. Whether the Lockean cap-and-trade system or the Georgist cap-and-trade system is adopted, the invisible hand of the market will move the emissions permits to their most productive use, as long as the market functions correctly. Both systems are efficient, but only one system is equitable. The Lockean system allows the resource rents to be largely captured by people in the global north, but the Georgist system distributes them equally to everyone.

## Conclusion

Henry George's system shows us how to equitably distribute natural resources among members of the present generation as well as between the present generation and future generations. I will conclude here with a fitting quote from George himself:

*"If we are all here by the equal permission of the Creator, we are all here with an equal title to the enjoyment of his bounty—with an equal right to the use of all that nature so impartially offers. This is a right which is natural and inalienable; it is a right which vests in every human being as he enters the world, and which during his continuance in the world can be limited only by the equal rights of others... If all existing men were to unite to grant away their equal rights, they could not grant away the right of those who follow them. For what are we but tenants for a day? Have we made the earth, that we should determine the rights of those who after us shall tenant it in their turn? The Almighty, who created the earth for man and man for the earth, has entailed it upon all the generations of the children of men by a decree written upon the constitution of all things—a decree which no human action can bar and no prescription determine."<sup>3</sup>*

3 Henry George, *Progress and Poverty*, p.300-301

## Leave a gift

In 1928, Dr Edgar Culley established the Henry George Foundation of Australia with a substantial donation of £20,000 (close to \$1m in today's dollars). This gift created a legacy that ensured the movement to promote the ideas of Henry George in Australia has continued to this day.

While most of us don't have the resources to make donations of that magnitude, there is a simple yet significant way you can contribute.

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