

Understanding the Impact of COVID-19 on Economy and Environment in the  
Asia-Pacific Region  
(Technical Report)

Pathways to 2°C: The Controversy over the Place of Biomass in a Low-Carbon  
Energy Future  
(STS Research Paper)

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by

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## Preface

What are the tradeoffs between economic and environmental interests? Economic slowdown due to COVID-19 has exposed the extent to which human activity affects the environment, which raises the question of how a low-carbon energy future will be achieved.

The COVID-19 pandemic has provoked longstanding and competing interests of the economy and environment. Policy responses from governments have varied across the globe, but the economic downturn has plagued countries regardless of their COVID-19 response plan. Lockdowns in the first half of 2020 impeded economic activity, leading to a reduction in the amount of industrial activity and hence emissions. By analyzing government response data, weekly estimates of GDP, changes in transportation, and environmental markers such as air and water quality, this project highlights the effects of abrupt policy adjustments on economies and environment in the Asia-Pacific region. The connections drawn between these areas can help inform future decisions were another pandemic or similar global crisis to arise.

Proponents of bioenergy contend that it can serve as a carbon-neutral substitute for fossil fuels, but the claim is controversial. The 2015 Paris Agreement requires signatory countries to reconfigure their energy mix to support greater shares of renewables, and bioenergy presents a convenient alternative. In the European Union, policies encouraging the use of bioenergy have spurred demand for biomass, which the United States is helping to supply. Yet bioenergy emits substantial carbon dioxide. The net emissions benefit of biomass depends on the source material, and experts, interest groups, and advocacies disagree about how the calculation is best made. Hence a scientific determination becomes, in practice, a political calculation.

## **List of Contents**

1. Technical Report: Understanding the Impact of COVID-19 on Economy and Environment in the Asia-Pacific Region
2. Sociotechnical Research Paper: Pathways to 2°C: The Controversy over the Place of Biomass in a Low-Carbon Energy Future
3. Prospectus