Langkah Mudah Menghitung Aksi Iklim Individu dengan Akuntabel

Melalui Indonesia Zero Emission App (EMISI)

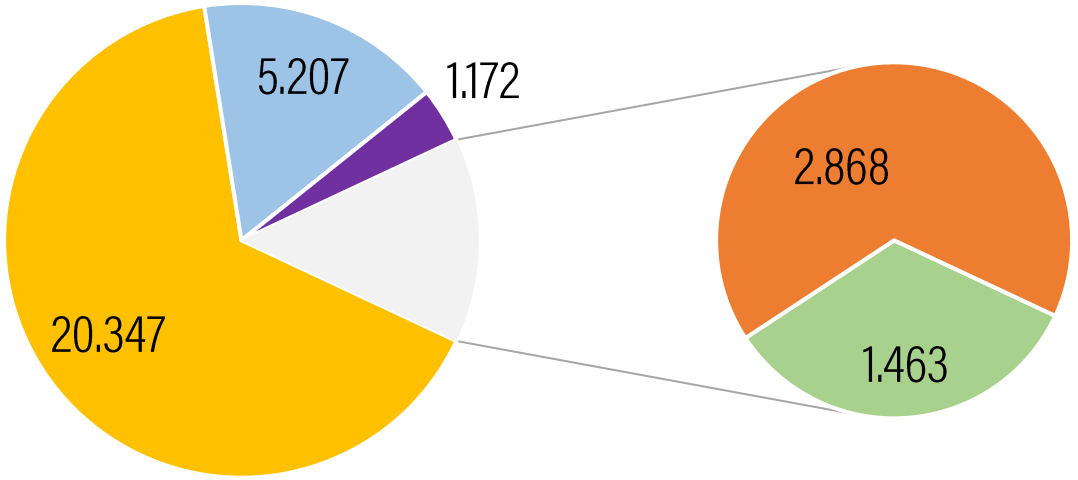
New York, 20 September 2019

&

Jakarta, 20 September 2019

Studi kasus: WRI Indonesia menunjukkan emisi dapat "dikelola".

Proporsi emisi 5 kantor ($kgCO_2$/bulan), 2018



Gaya Hidup	ID
Car-sharing dan car-pooling	
Manajemen sampah	
Peniadaan daging merah	
Adopsi pohon sebagai souvenir	
Pengurangan perjalanan udara	
Sertifikat energi terbarukan	
Penghitungan emisi per program	

bit.ly/EMISI-appstore | bit.ly/EMISI-playstore

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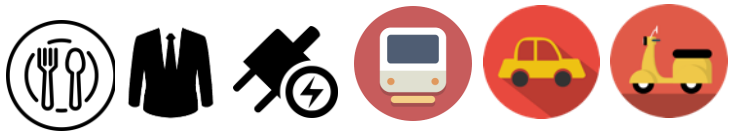
Nilai emisi dan aksi iklim individu perlu transparan agar berdampak.

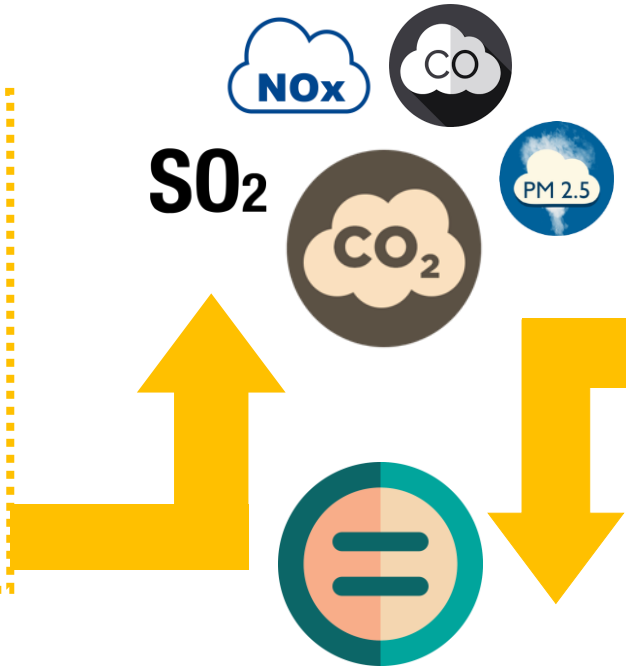
Aktivitas Harian



Emisi/orang/km/kg/kWh:

85 – 245 grCO_2 & polutan lain

tergantung pola konsumsi



Menanam Pohon

Serapan/pohon/tahun:

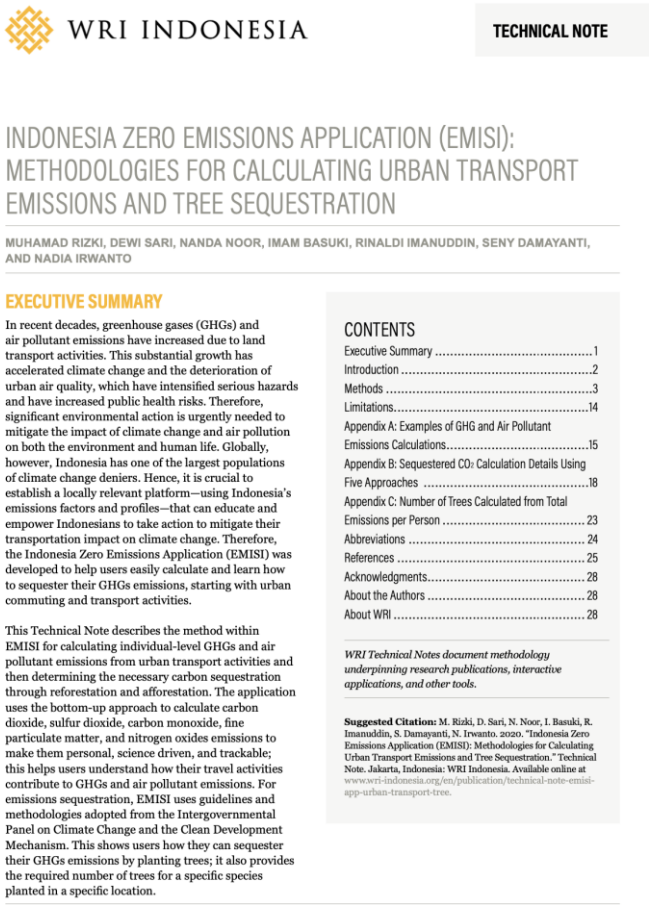
50 – 150 kgCO_2

tergantung pola pertumbuhan

"Saya tanam 1 (atau 10, 100) pohon di halaman rumah/sekolah/kantor, sudah cukup belum ya?"

"Kalau saya mau aksi iklim lebih, sebaiknya langkah apa yang diambil?"

Cara hitung emisi dan serapan pohon bisa mudah dan akuntabel.



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TECHNICAL NOTE

INDONESIA ZERO EMISSIONS APPLICATION (EMISI): METHODOLOGIES FOR CALCULATING URBAN TRANSPORT EMISSIONS AND TREE SEQUESTRATION

MUHAMAD RIZKI, DEWI SARI, NANDA NOOR, IMAM BASUKI, RINALDI IMANUDDIN, SENY DAMAYANTI, AND NADIA IRWANTO

EXECUTIVE SUMMARY

In recent decades, greenhouse gases (GHGs) and air pollutant emissions have increased due to land transport activities. This substantial growth has accelerated climate change and the deterioration of urban air quality, which have intensified serious hazards and have increased public health risks. Therefore, significant environmental action is urgently needed to mitigate the impact of climate change and air pollution on both the environment and human life. Globally, however, Indonesia has one of the largest populations of climate change deniers. Hence, it is crucial to establish a locally relevant platform—using Indonesia's emissions factors and profiles—that can educate and empower Indonesians to take action to mitigate their transportation impact on climate change. Therefore, the Indonesia Zero Emissions Application (EMISI) was developed to help users easily calculate and learn how to sequester their GHGs emissions, starting with urban commuting and transport activities.

This Technical Note describes the method within EMISI for calculating individual-level GHGs and air pollutant emissions from urban transport activities and then determining the necessary carbon sequestration through reforestation and afforestation. The application uses the bottom-up approach to calculate carbon dioxide, sulfur dioxide, carbon monoxide, fine particulate matter, and nitrogen oxides emissions to make them personal, science driven, and trackable; this helps users understand how their travel activities contribute to GHGs and air pollutant emissions. For emissions sequestration, EMISI uses guidelines and methodologies adopted from the Intergovernmental Panel on Climate Change and the Clean Development Mechanism. This shows users how they can sequester their GHGs emissions by planting trees; it also provides the required number of trees for a specific species planted in a specific location.

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WRI Technical Notes document methodology underpinning research publications, interactive applications, and other tools.

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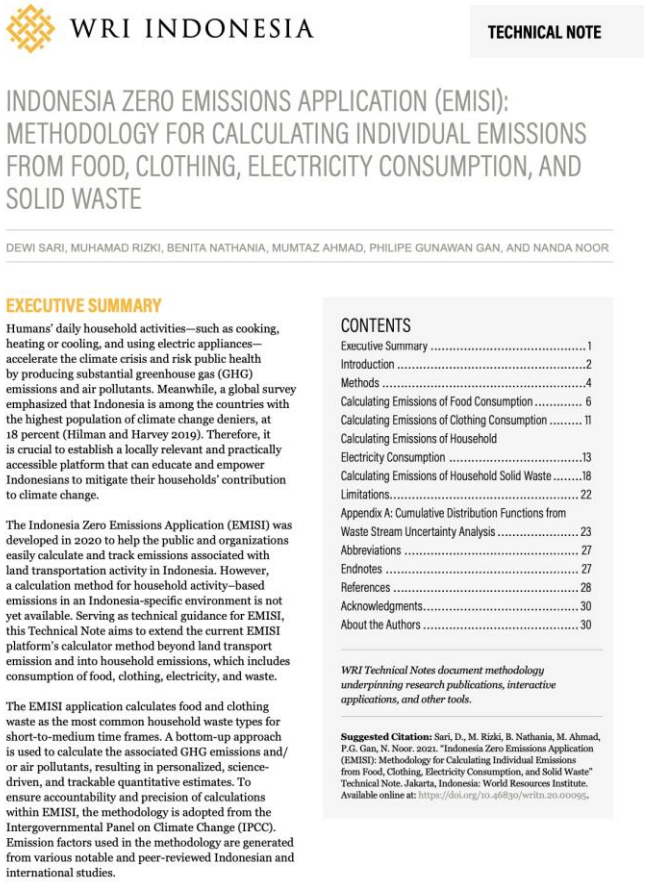

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TECHNICAL NOTE

INDONESIA ZERO EMISSIONS APPLICATION (EMISI): METHODOLOGY FOR CALCULATING INDIVIDUAL EMISSIONS FROM FOOD, CLOTHING, ELECTRICITY CONSUMPTION, AND SOLID WASTE

DEWI SARI, MUHAMAD RIZKI, BENITA NATHANIA, MUMTAZ AHMAD, PHILIPE GUNAWAN GAN, AND NANDA NOOR

EXECUTIVE SUMMARY

Humans' daily household activities—such as cooking, heating or cooling, and using electric appliances—accelerate the climate crisis and risk public health by producing substantial greenhouse gas (GHG) emissions and air pollutants. Meanwhile, a global survey emphasized that Indonesia is among the countries with the highest population of climate change deniers, at 18 percent (Hilman and Harvey 2019). Therefore, it is crucial to establish a locally relevant and practically accessible platform that can educate and empower Indonesians to mitigate their households' contribution to climate change.

The Indonesia Zero Emissions Application (EMISI) was developed in 2020 to help the public and organizations easily calculate and track emissions associated with land transportation activity in Indonesia. However, a calculation method for household activity–based emissions in an Indonesia-specific environment is not yet available. Serving as technical guidance for EMISI, this Technical Note aims to extend the current EMISI platform's calculator method beyond land transport emission and into household emissions, which includes consumption of food, clothing, electricity, and waste.

The EMISI application calculates food and clothing waste as the most common household waste types for short-to-medium time frames. A bottom-up approach is used to calculate the associated GHG emissions and/or air pollutants, resulting in personalized, science-driven, and trackable quantitative estimates. To ensure accountability and precision of calculations within EMISI, the methodology is adopted from the Intergovernmental Panel on Climate Change (IPCC). Emission factors used in the methodology are generated from various notable and peer-reviewed Indonesian and international studies.

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WRI Technical Notes document methodology underpinning research publications, interactive applications, and other tools.

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- Gunakan iptek Indonesia
- Berbasis informasi di lapangan
- Hitungan tidak selalu sederhana
- Kalkulator mudah diaplikasikan
- Terulas ahli nasional dan global
- Terbuka dan transparan
- Pemutakhiran terjadwal

Baca di bit.ly/TNEMISI.

bit.ly/EMISI-appstore | bit.ly/EMISI-playstore

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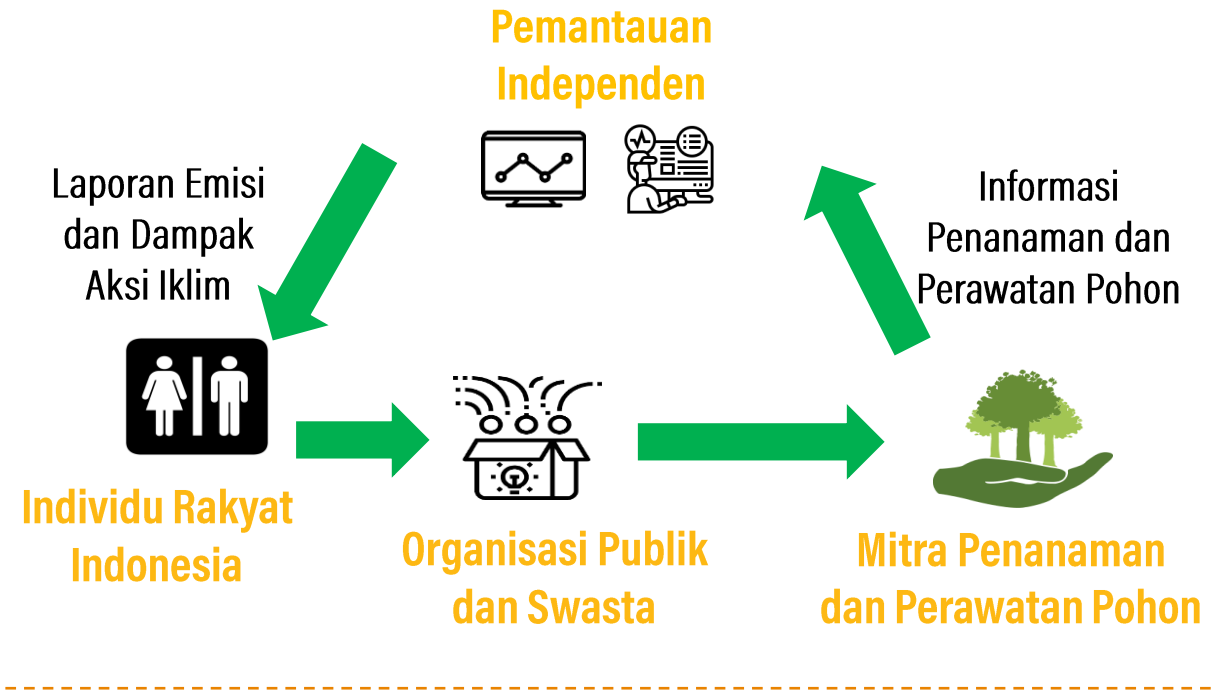
EMISI app yang membantu kolaborasi dan partisipasi iklim individu.

Tujuan

1. Bisa belajar apa itu emisi dan sumbernya.
2. Bisa catat perubahan emisi individu per hari.
3. Bisa aksi iklim langsung untuk kurangi emisi.
4. Bisa restorasi hutan sesuai kebutuhan daerah.
5. Bisa bantu iptek emisi dan pohon di Indonesia.

Skema



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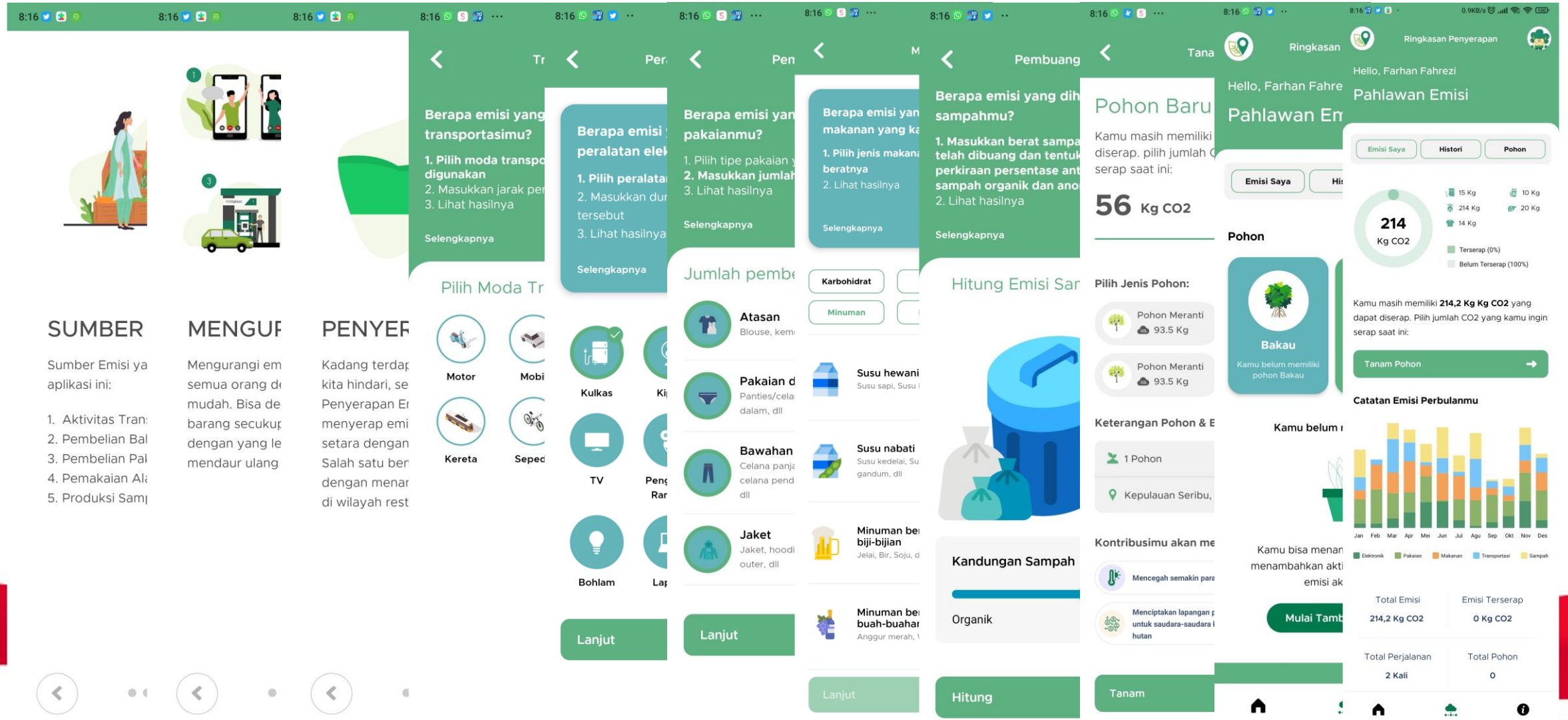
Tampilan/pengalaman *user* dapat mendorong perubahan perilaku.



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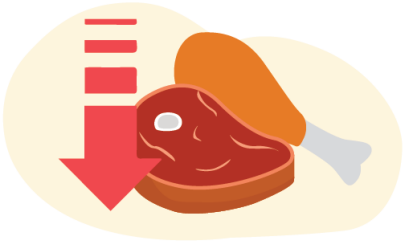
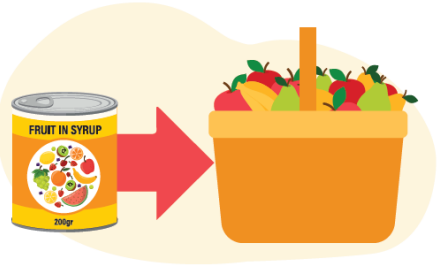
Kurangi emisi dahulu sebisa mungkin, sebelum menyerapnya.

SUFFICIENT

LOCAL



LESS MEAT



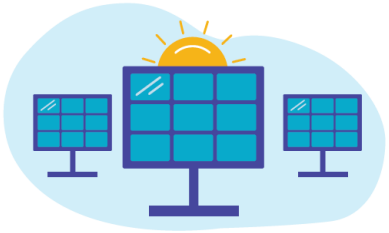
LESS PACKAGED / PROCESSED FOOD

NO FOOD WASTE

GROW

WISE

CHANGE



IMPROVE

Kurangi emisi dahulu sebisa mungkin, sebelum menyerapnya.

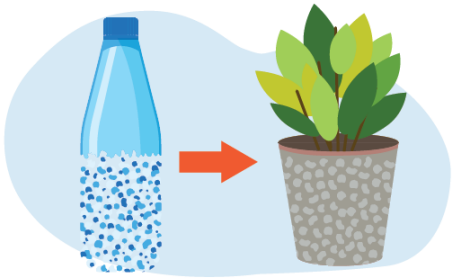
TREAT

CREATIVE

SELECTIVE

REDUCE

REUSE



RECYCLE

bit.ly/EMISI-appstore | bit.ly/EMISI-playstore

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4 hal yang anak muda bisa lakukan untuk mendukung aksi iklim.

Kurangi emisimu dengan menerapkan gaya hidup rendah karbon, seperti hemat listrik, bepergian secukupnya dan konsumsi lebih banyak sayur.

Serap emisimu dengan mengikuti berbagai program penyerapan karbon, seperti penanaman dan perawatan pohon.

Sampaikan masukanmu terhadap ilmu pengetahuan, teknologi dan metode perhitungan emisi agar semakin bermanfaat.

Bagikan ceritamu dengan sebanyak mungkin anak muda Indonesia lain di keluarga, komunitas dan organisasimu di kota-kota lain.

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melalui Indonesia Zero Emission App (EMISI)

Terima kasih #PejuangBumi!

https://wri-indonesia.org/en/our-work/project/EMISI

Dipresentasikan oleh **Nanda Noor**

Penanggung Jawab Senior Lanskap & Bisnis Berkelanjutan

17, 18, 19 Agustus 2021