Destination 2050

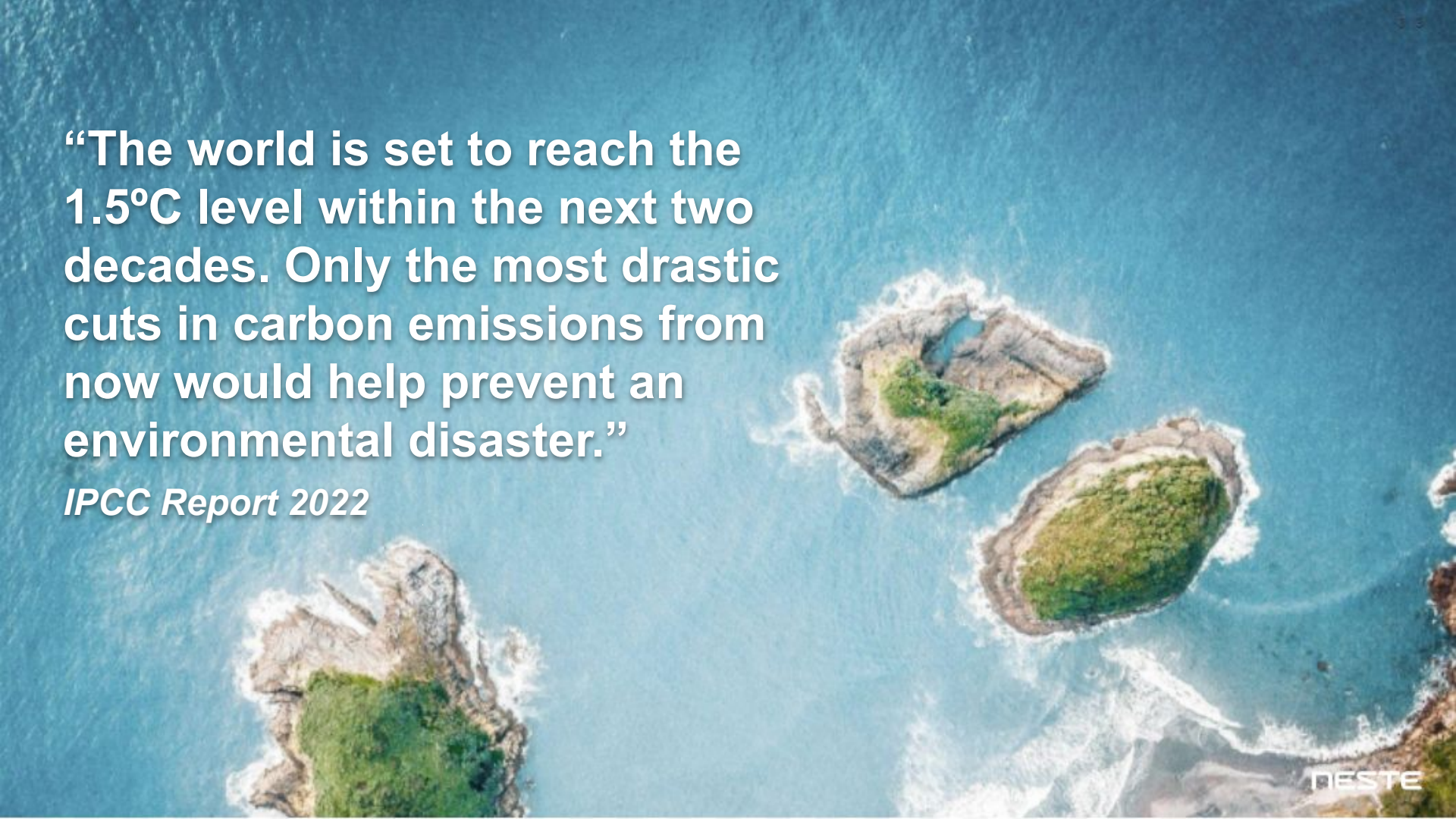
SAF – time for waste?

EUROCONTROL Conference: Where to Next for European Aviation?

Thorsten Lange - Executive Vice President, Renewable Aviation, Neste

Brussels, Belgium, 04.10.2022

NESTE


“The world is set to reach the 1.5ºC level within the next two decades. Only the most drastic cuts in carbon emissions from now would help prevent an environmental disaster.”
IPCC Report 2022
NESTE


It is a joint mission

Aviation has committed to achieving net-zero emissions by 2050

- Aviation accounts for 2-3 % of global carbon emissions - growing to >20% by 2050 if action not taken
- In addition, non-CO_2 effects, like contrails, have an approximately 3 times higher climate impact than CO_2 emissions alone
- Sustainable Aviation Fuel (SAF) has been identified as one of the key elements in helping achieve these goals
- Despite the pandemic and geopolitical challenges, the outlook for SAF is increasingly clear

Neste's Sustainable Aviation Fuel capacity will reach 1.5 Mt by end of 2023, and 2.2 Mt by 2026

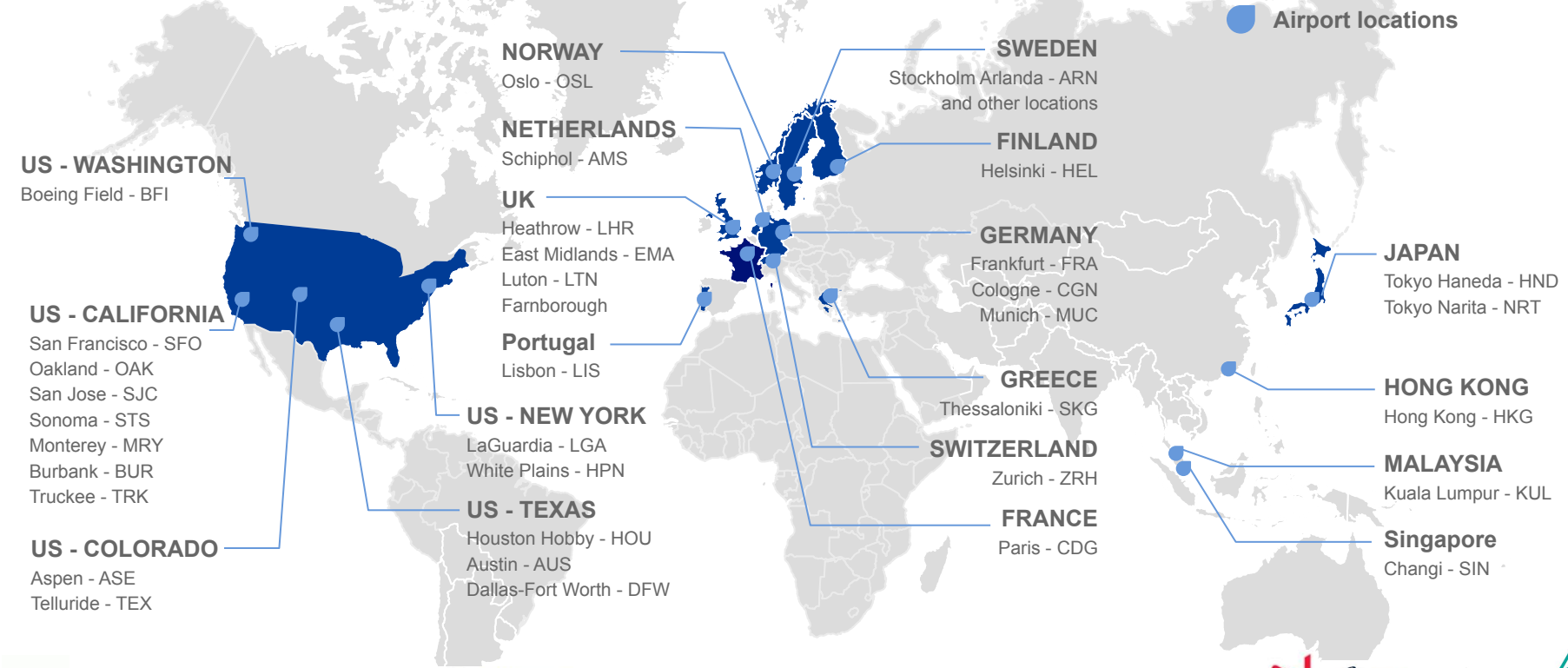
2019
100 kton SAF
total global production capacity

2023
1.5 Mton SAF
total global capacity through investments in Rotterdam and Singapore

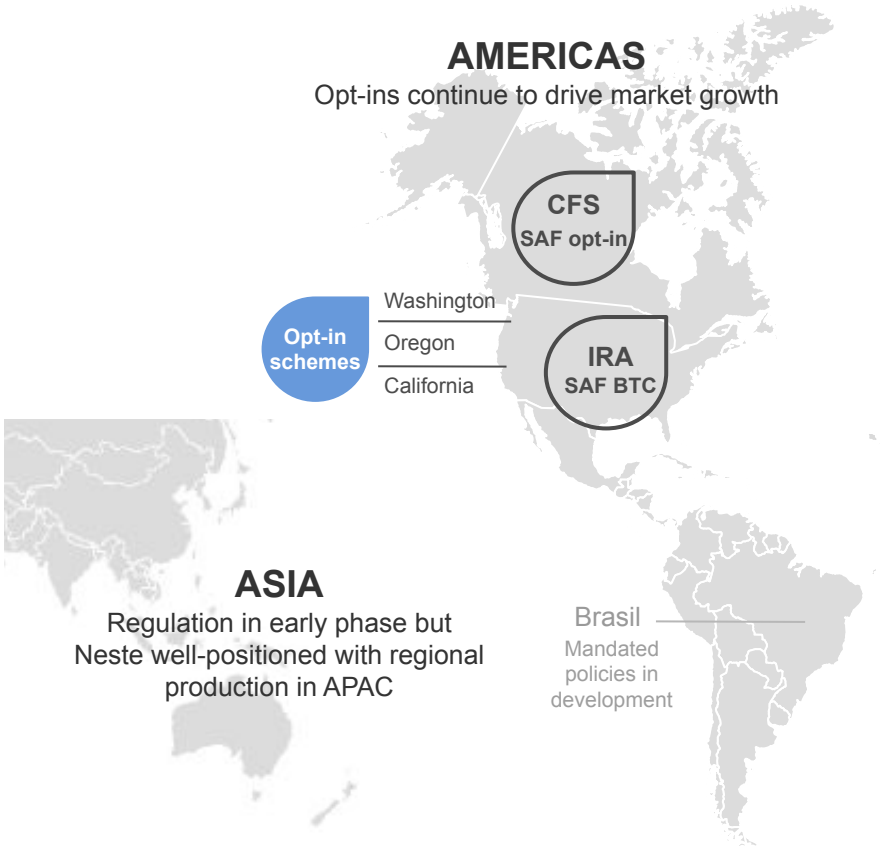
2026
2.2 Mton SAF
total global capacity through further investments in Rotterdam

Beyond
Continuing growth with current and new technologies

Neste's SAF growing availability globally, both through Neste's own network of airports and through distributors



Strong growth in sustainable aviation fuel market with opt-in schemes, incentives and SAF mandates



AMERICAS

Opt-ins continue to drive market growth

CFS
SAF opt-in

Opt-in schemes

Washington
Oregon
California

IRA
SAF BTC

ASIA

Regulation in early phase but Neste well-positioned with regional production in APAC

Brasil
Mandated policies in development

EUROPE

Regulation and commitments are progressing

	2022	2030
Norway	0.5%	30%
Sweden	0.8%	27%
Netherlands	opt-in	14%
UK	opt-in	10%
France	1%[8]	ReFuel EU

ReFuelEU
Proposal for SAF % of aviation fuel at EU airports

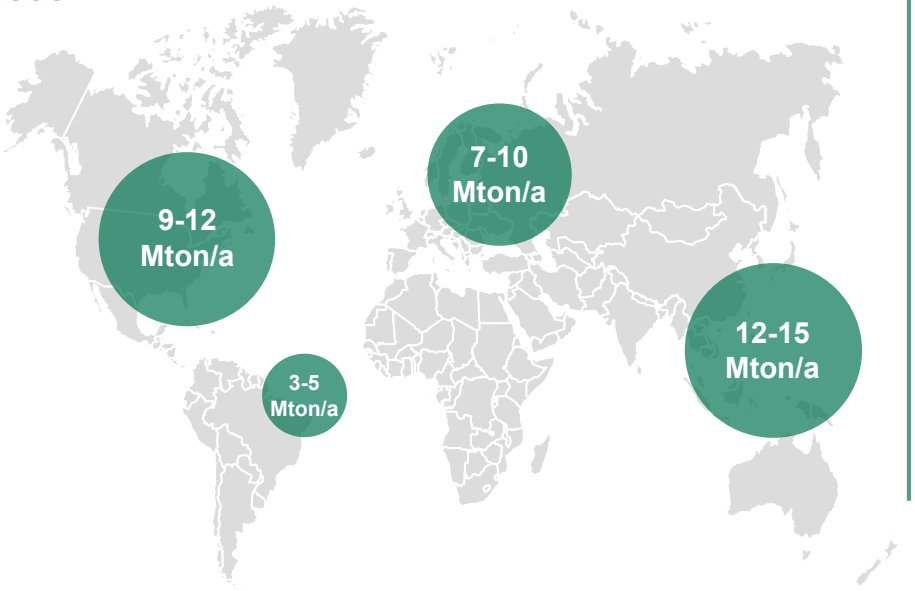
2% by 2025 | 5%

2022 | 2030 % of SAF required in fuel volume

NESTE

Global potential of waste and residue oils and fats amounts to ca. 40 Mton/a by 2030

Regional split of waste and residues availability in 2030

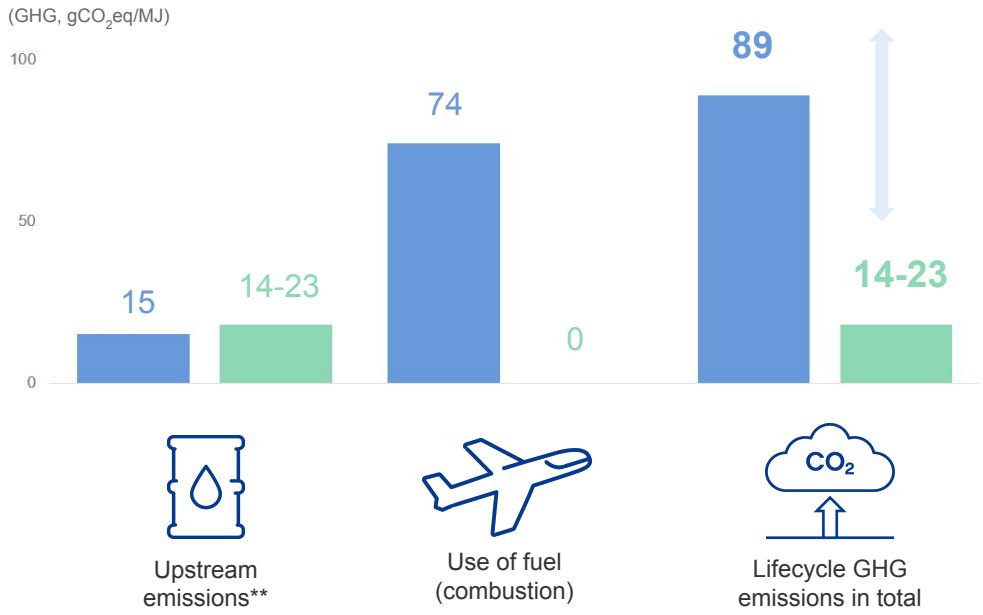


Feedstock categories with substantial growth potential beyond 40 Mton/a

- Novel vegetable oils[1], algae oils
- Lignocellulosics and municipal solid waste enabled by new technologies
- Raw materials enabled by Power-to-X technologies

1) Novel vegetable oils from advanced agricultural concepts such as silvopasture, intermediate cropping and use of degraded lands

SAF can reduce the GHG emissions up to 80%* over the lifecycle compared to fossil jet fuel



NESTE MY
Sustainable Aviation Fuel

Made from

100%

waste and residues, such as used cooking oil

Drop-in solution requiring

zero

additional investment in infrastructure

available today

Fossil jet fuel
Neste MY SAF from waste and residues

The fuel lifecycle extends from raw material extraction to the consumption of the fuel.
* According CORSIA LCA methodology
**Production of feedstock, transports, refining

NESTE

The time for action is now!


NESTE
Change runs on renewables