



Horizon Europe

MISSION BOARD FOR SOIL
HEALTH AND FOOD

[#HorizonEU](#) [#MissionSoil](#)

Apple soil game
Joint Research Centre

Research
and
Innovation

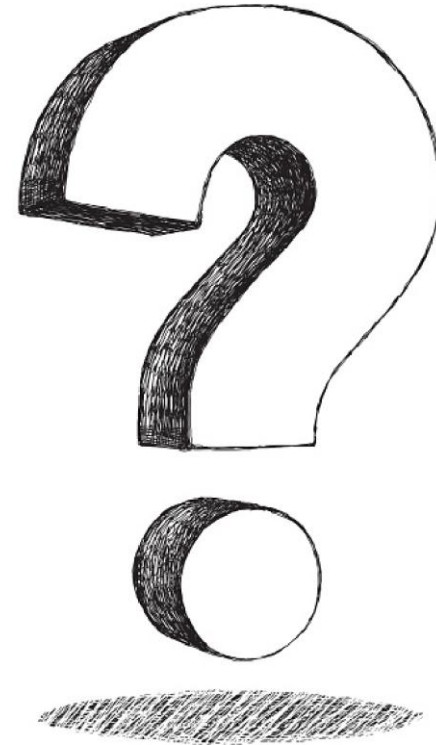


What did you have for breakfast this morning?



So, where do breakfast cereals, yogurt or fruit come from?

- **Supermarket?**
- **A laboratory?**
- **Cereal grains?**
- **Trees and bushes?**
- **Cows?**





Breakfast cereals are made from the seeds of crops such as corn, wheat, oats and barley.

Fruit come from trees, bushes and small plants.

Yogurt is made from fermented milk. To produce milk, cows need to eat grass.

What do they have in common?

All plants need fertile soils to grow!



Do you know how much naturally fertile soil is there on our planet?

For what we eat?

For our clothes?

For our homes?

For energy?

The apple metaphor



And even if our planet is called Earth, how much of it is covered by water (oceans and seas – the blue part)?



- 11%
- 66%
- 88%

The oceans



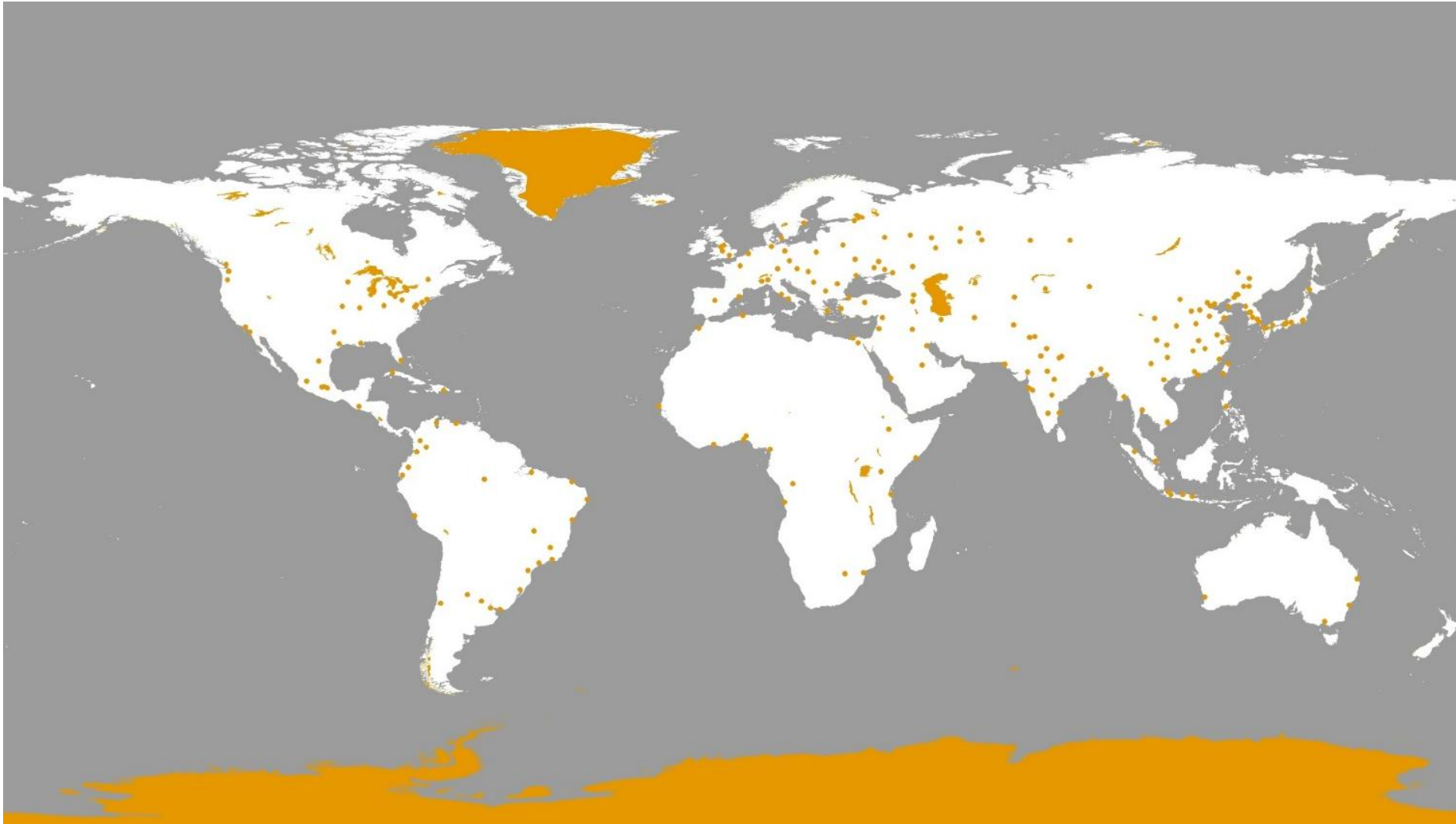
2/3

The lands



1/3

**And how much land is not covered by soil?
For example, glaciers, lakes, towns and cities**

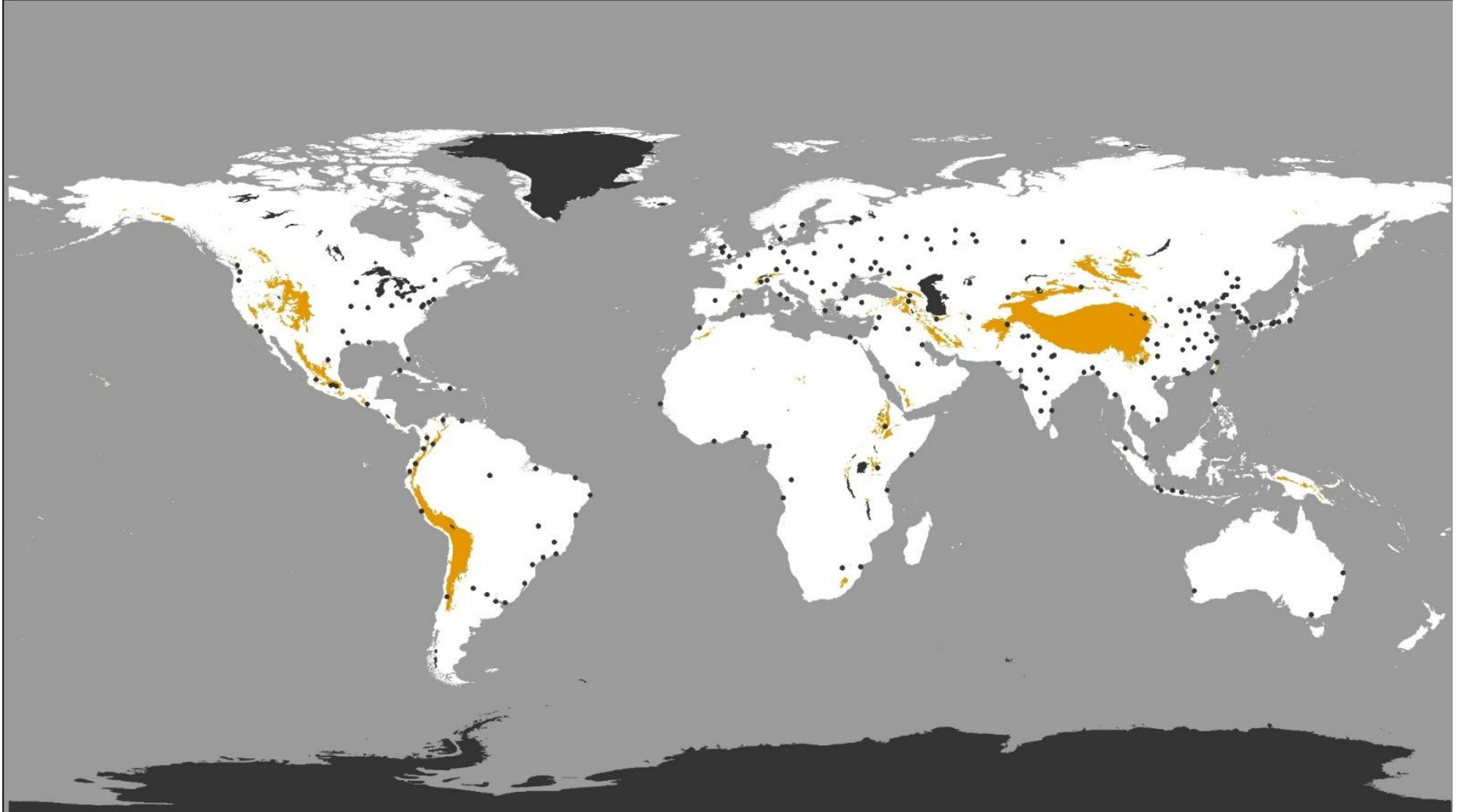


10%

15%

19%

Try to guess... how much of the planet is covered by very high mountains?

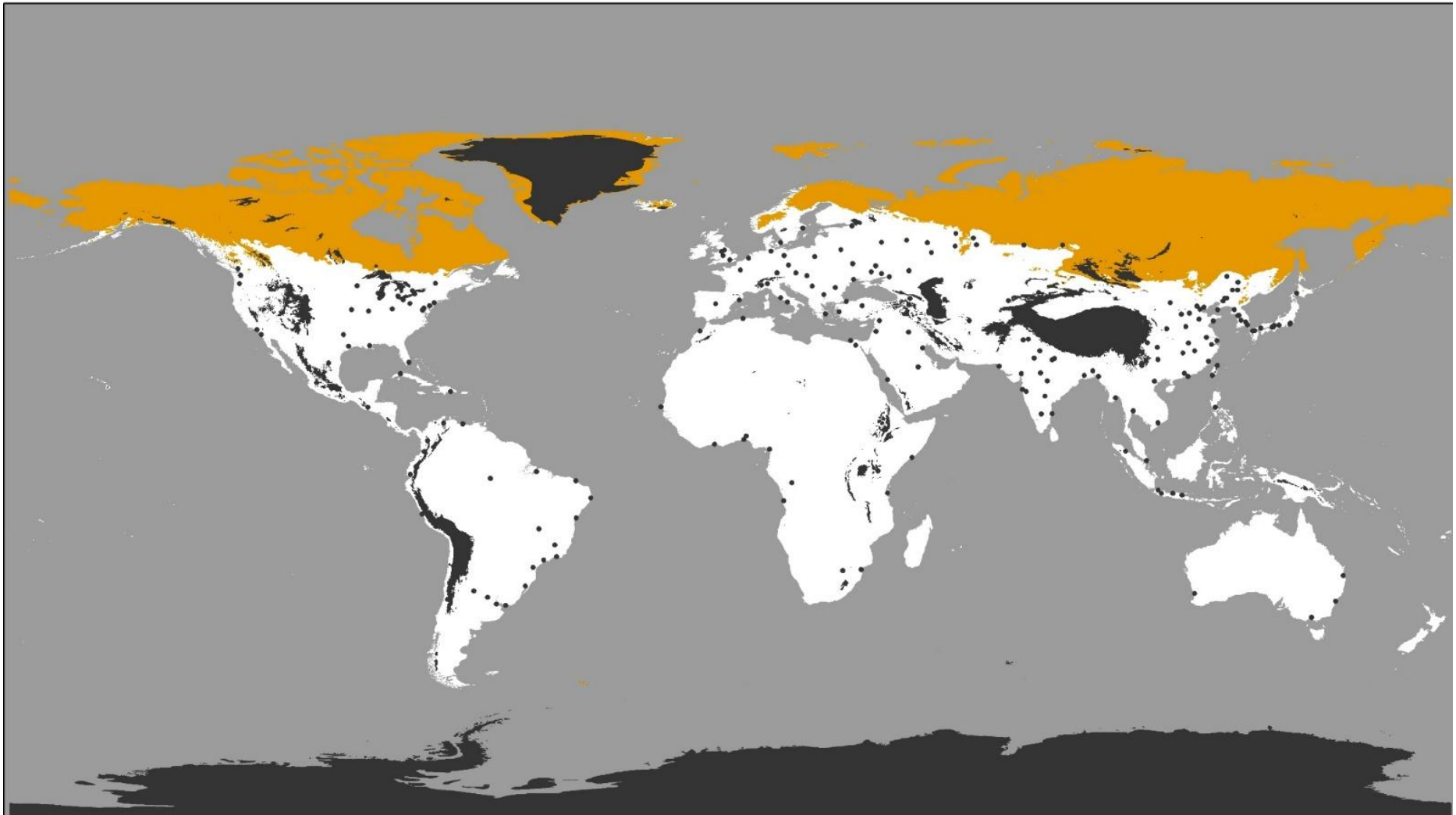


6%

10%

12%

How much is too cold?

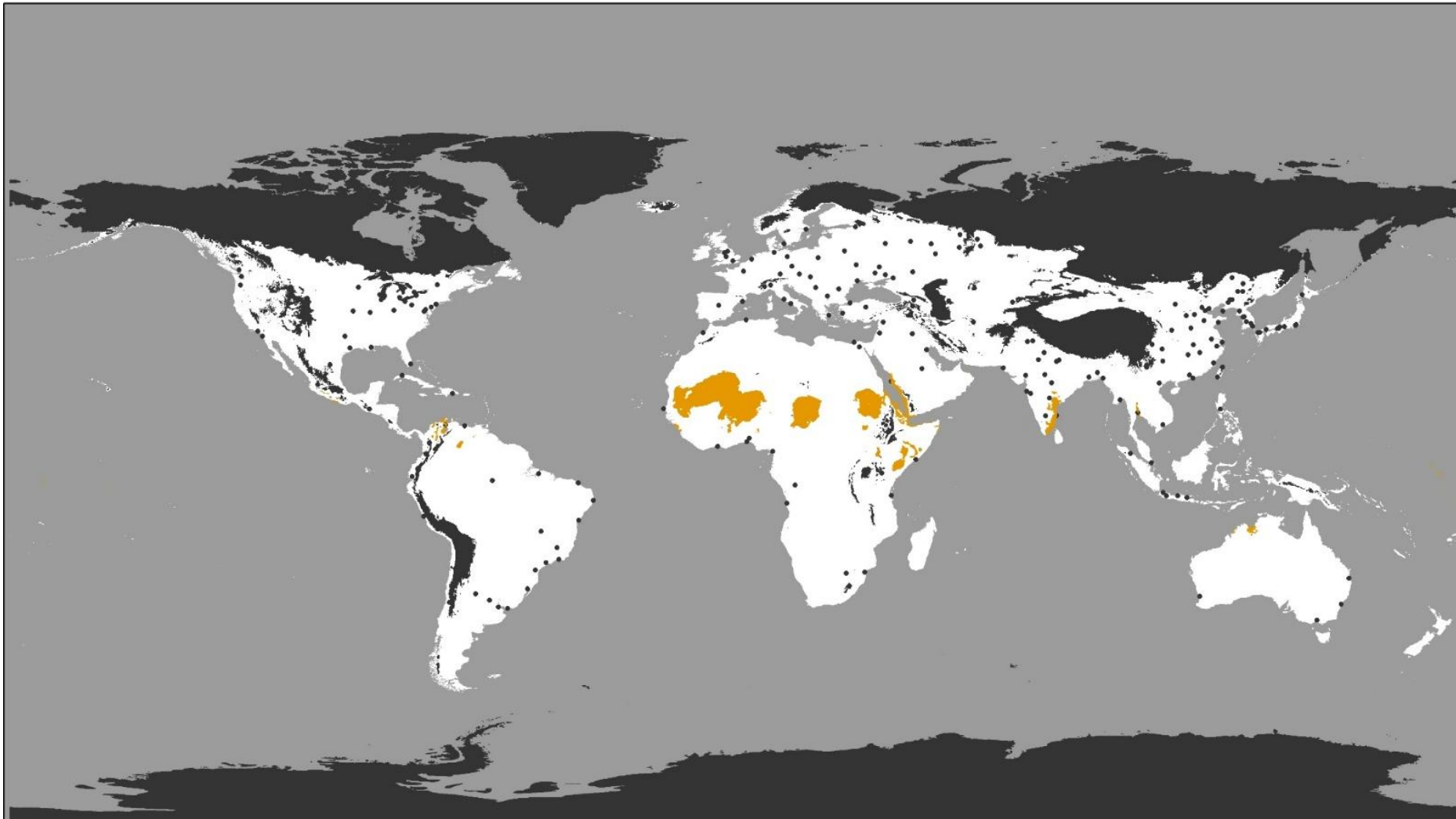


15%

19%

22%

How much of the planet is too hot?



2%

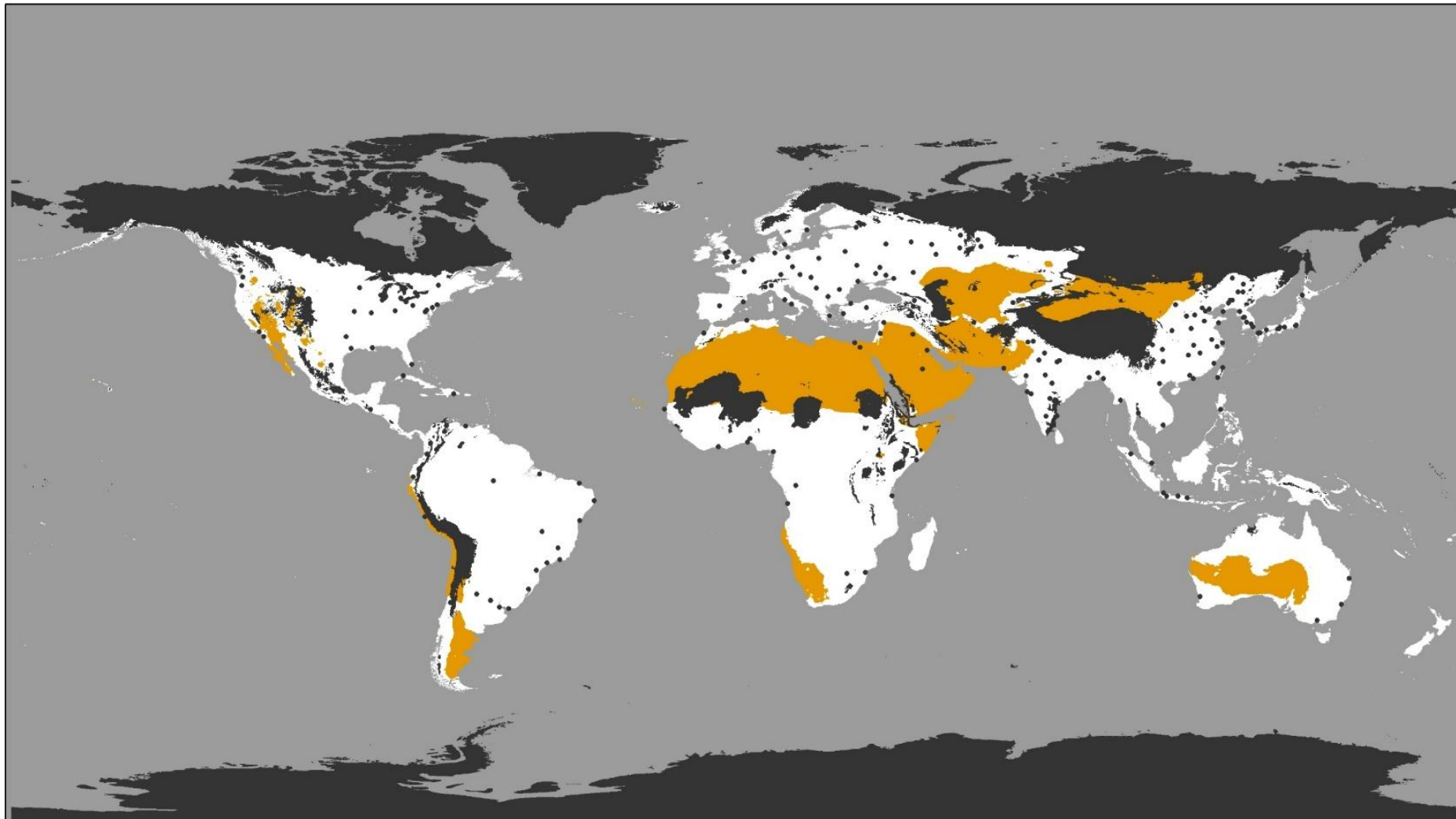
6%

10%



European
Commission

How much of the planet is too dry?



15%

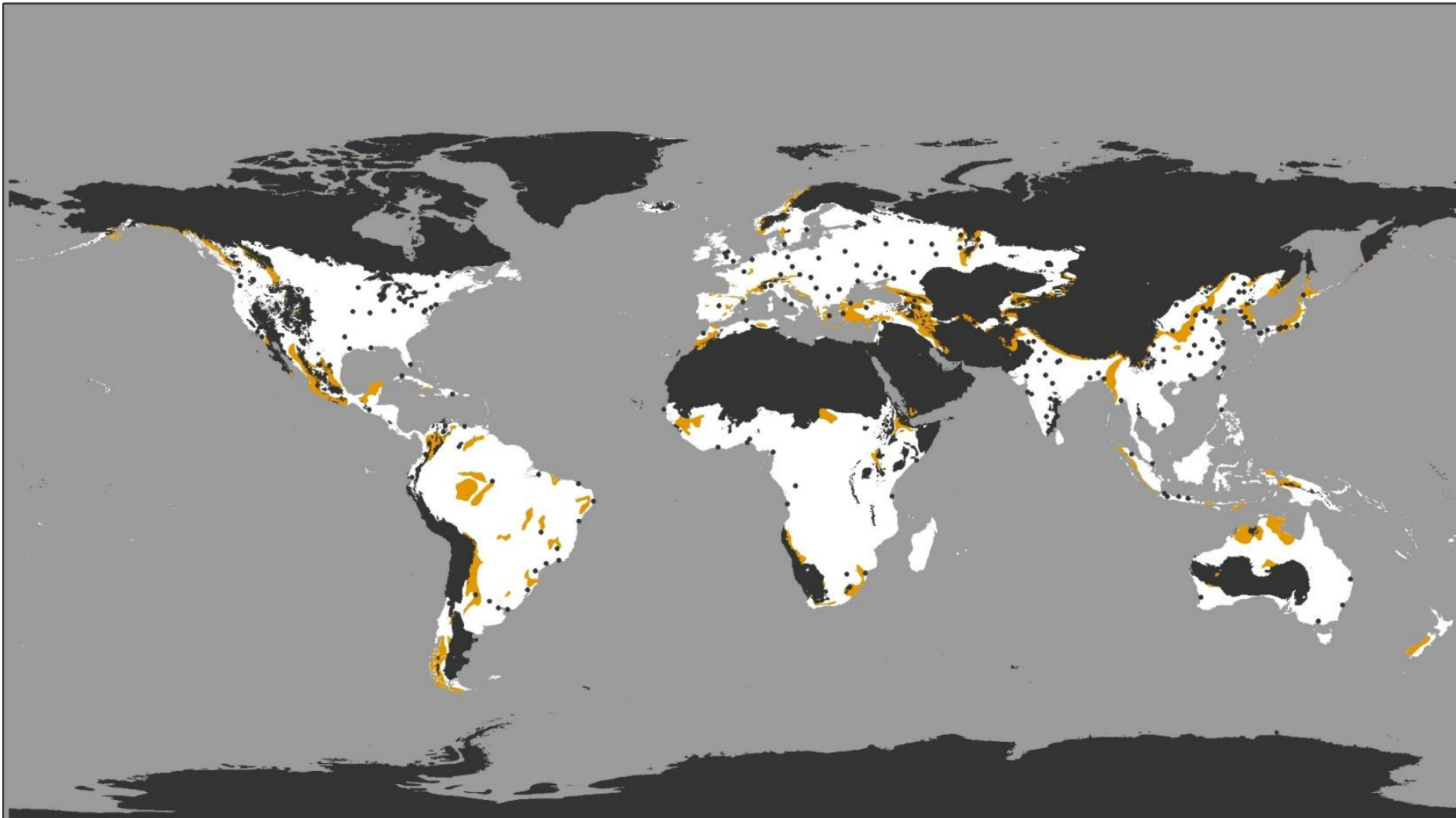
20%

25%



European
Commission

How much land is covered by thin and poorly developed soils?

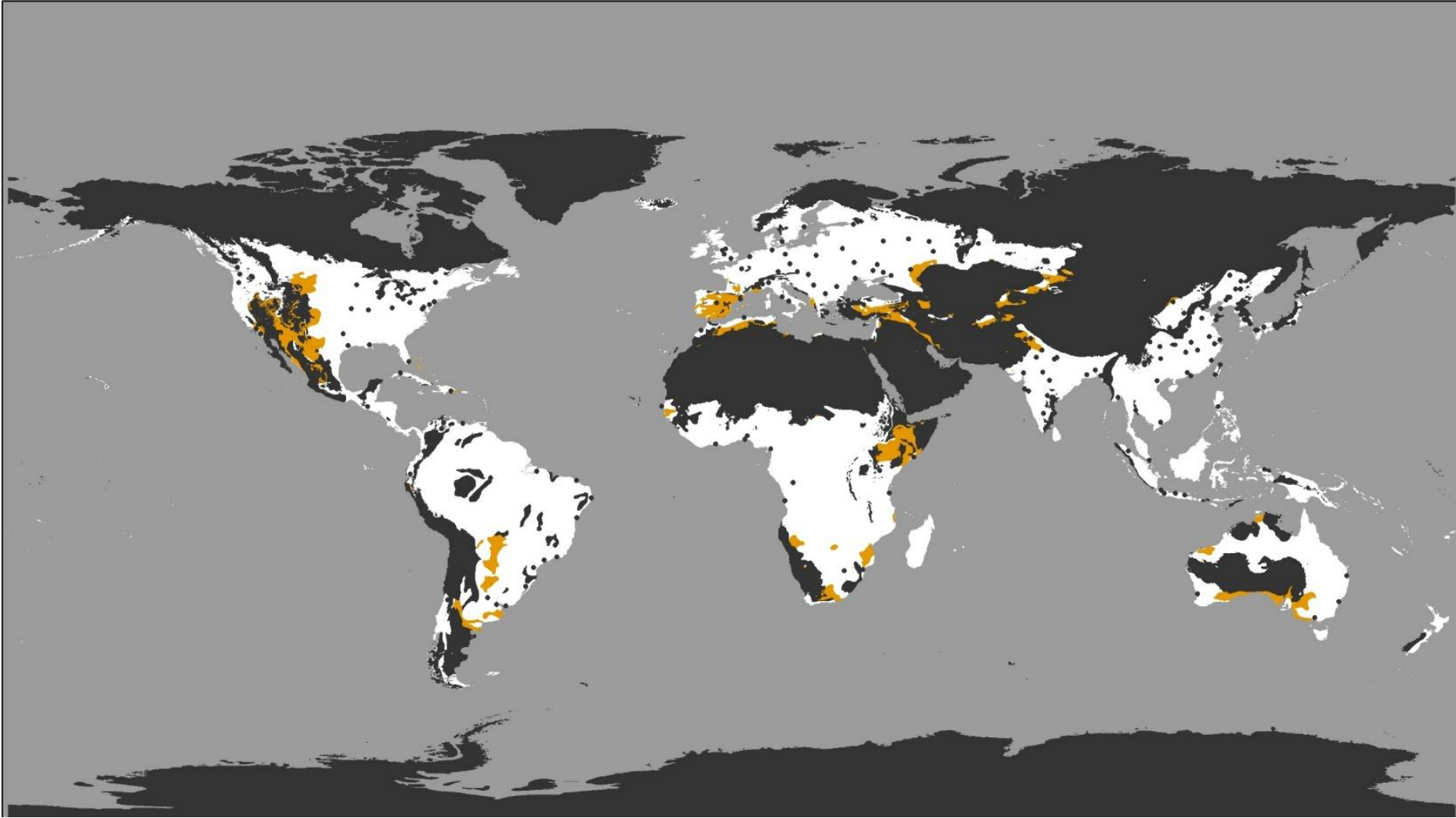


1%

3%

6%

How much of the planet is covered by 'salty' soils?

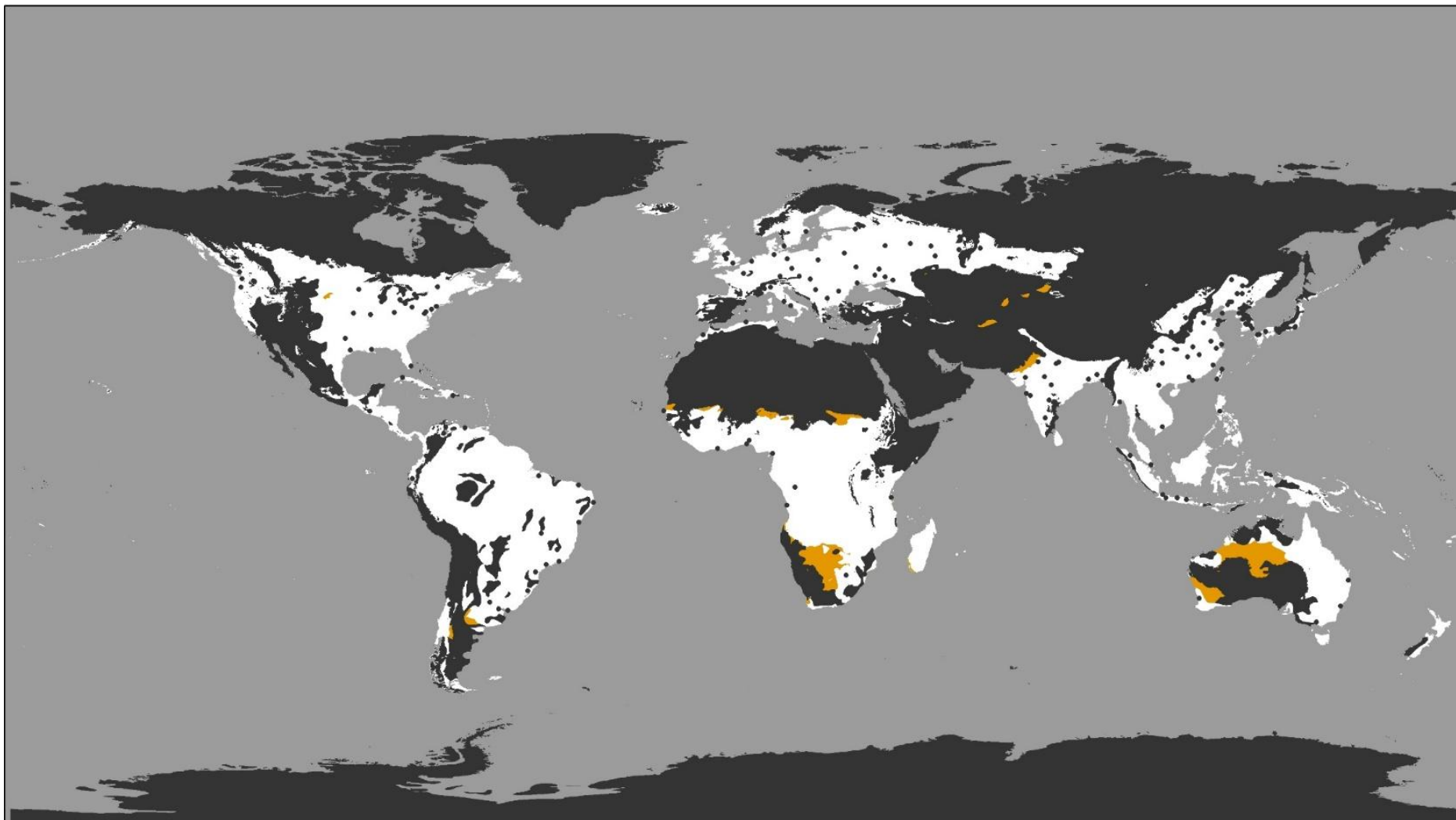


1%

3%

8%

How much of the Earth is too sandy?

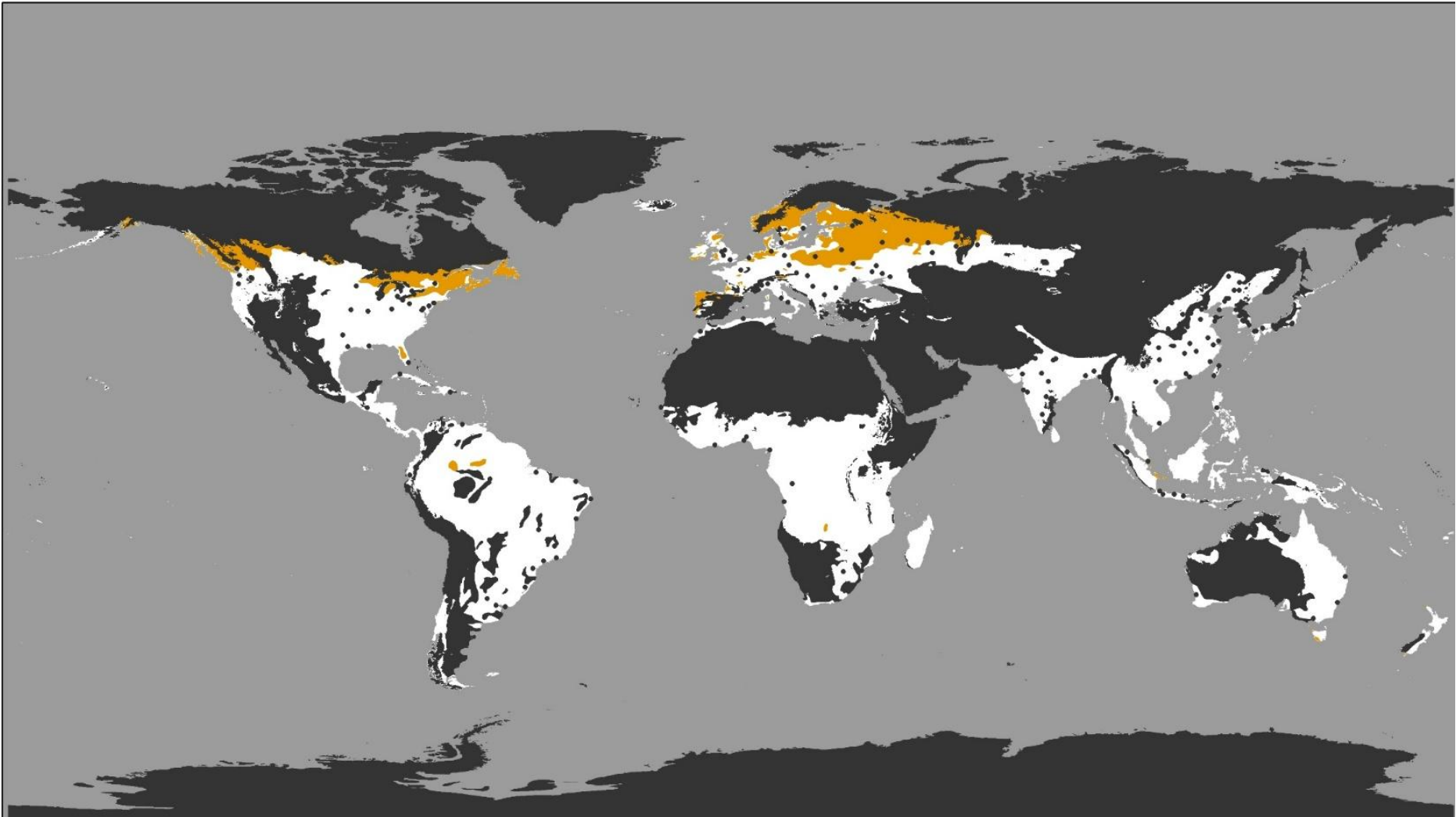


2%

6%

8%

How much is covered by conifer forests?

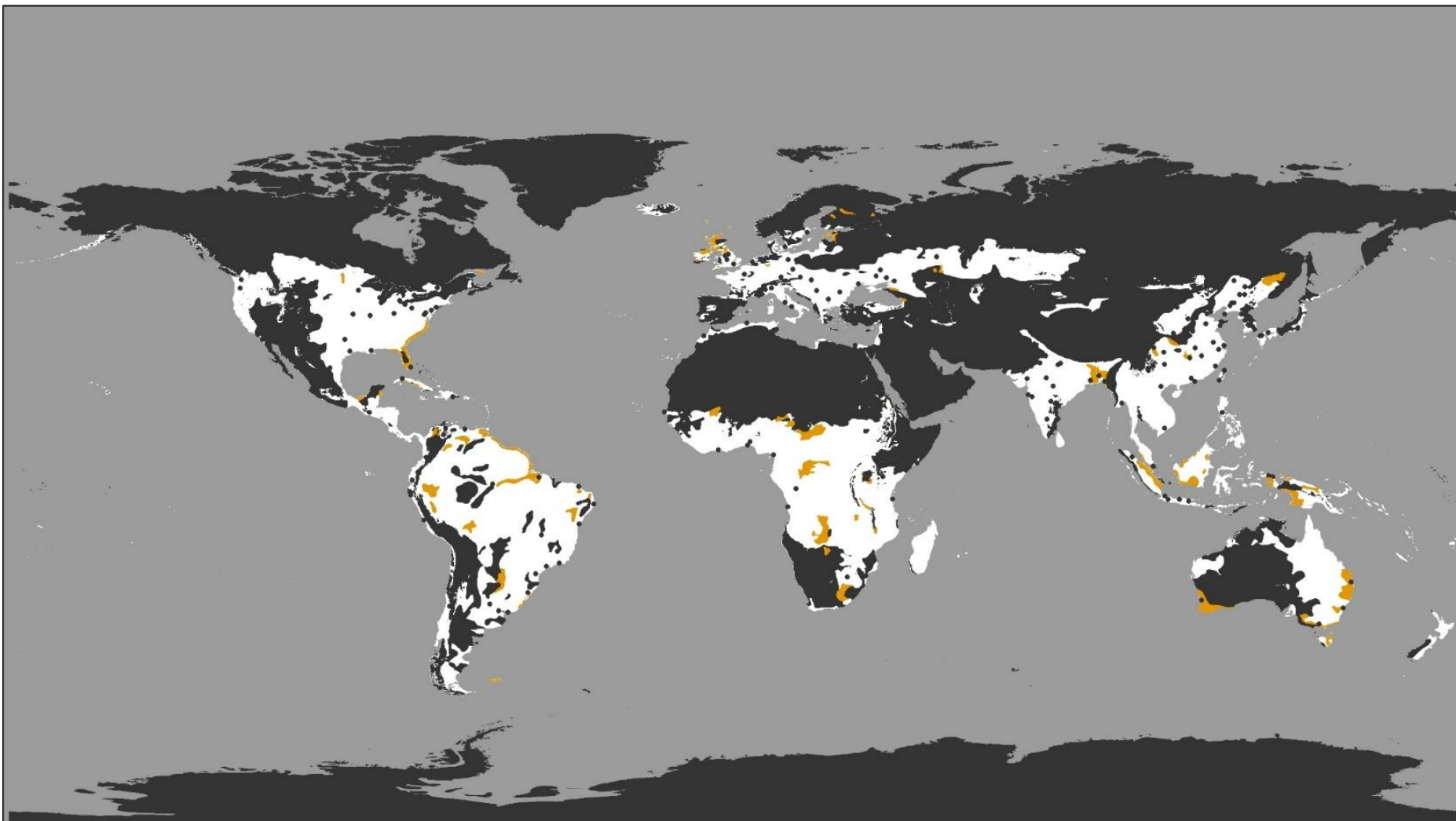


10%

15%

18%

How much is too wet or saturated?

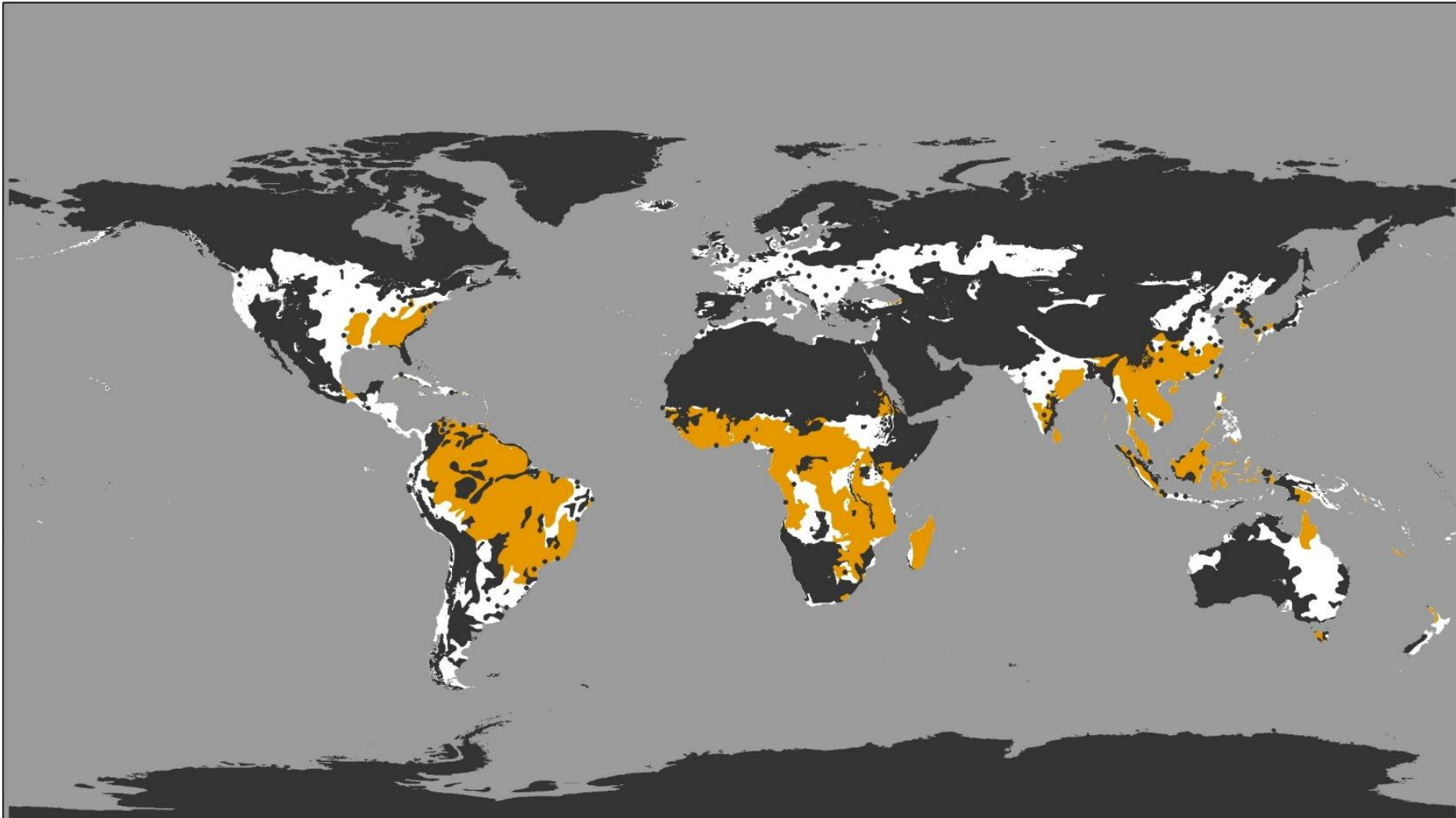


2%

5%

9%

How much is covered by tropical soils? acidic, low in nutrients & organic matter



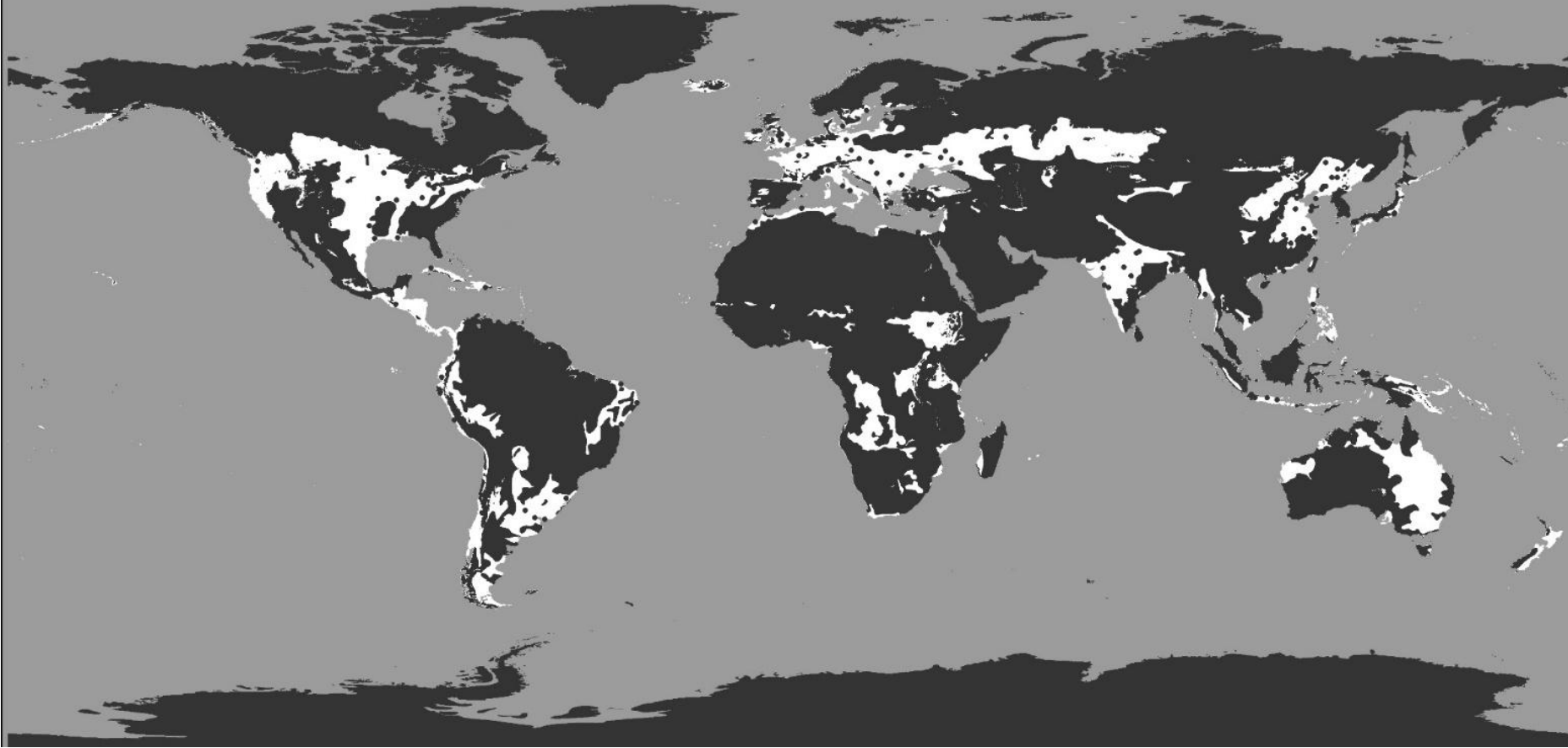
8%

10%

19%

So, after all this, how much land is left?

Only around 10-15% of the land surface!



To feed 9 billion people!

BUT! Soils are shallow...



...like the skin of
the planet.
Usually less
than 2m deep!

So in reality, we are talking only about the skin of the apple!



This small piece then represents all the naturally fertile land on the planet than can be used to readily cultivate food

And then, there are threats to soil...



**...climate change,
sealing, erosion,
contamination,
landslides,
increase in salts,
decrease in
organic matter,
loss of
biodiversity,
compaction...**

**This means that the remaining soil is under pressure
and is being continuously nibbled away**





**Survival of humankind
is based on this**





Sustainable management and effective conservation practices are essential to maintain soil fertility and thus ensure secure safe and nutritious food for us and for the future generations.





Thank you!

#HorizonEU #EUmissions #MissionSoil

<http://ec.europa.eu/horizon-europe>

Photo credits:

Orange juice © CSKN - Fotolia

Yogurts © AlceVision - Fotolia

Cornflakes © eyewave - Fotolia

Cow © Dudarev Mikhail - Fotolia

Earth © Nadalina - Fotolia

Threat urbanisation © Alexi Tauzin - Fotolia

Threat desertification © Giordano Aita - Fotolia

Threat landslides © Kedsirin - Fotolia

Maps:

© European Commission, Joint Research Centre

Keep in touch



<http://ec.europa.eu/horizon-europe>



<https://esdac.jrc.ec.europa.eu/>



[@EUAgri](https://twitter.com/EUAgri)



[EUAgri](https://www.facebook.com/EUAgri)



[euagri](https://www.youtube.com/euagri)



[euagrifood](https://www.instagram.com/euagrifood)