



Food and Agriculture  
Organization of the  
United Nations

# 3<sup>rd</sup> Workshop of the International Network of Black Soils



## Chapter 2. Portrait of Black Soils

Marcos E. Angelini, Ph.D  
INTA / FAO-GSP

13-14 December 2021





# Overview

- Chapter 2 “Portrait of the Black Soils” focuses on the spatial distribution of Black Soils
- The first section describes the methodology proposed by GSP for mapping Black Soils
- The second section is a country-based description of the spatial distribution and the soil-landscape relation

# Country summision

14 countries contributed to the second chapter of this report

1. Argentina
2. Brazil
3. Bulgaria
4. Canada
5. Colombia
6. Japan
7. Mexico
8. Mongolia
9. Poland
10. Syrian Arab Republic
11. Slovakia
12. Ukraine
13. United States of America
14. Uruguay

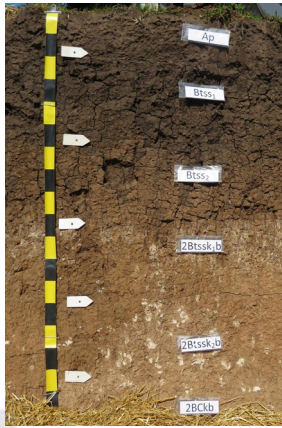






Andosols

Phaeozems



Phaeozems



Vertisols



Chernozems,  
Kantanzems,  
Phaeozems,  
Leptsols,  
Cambisols and Gleysols



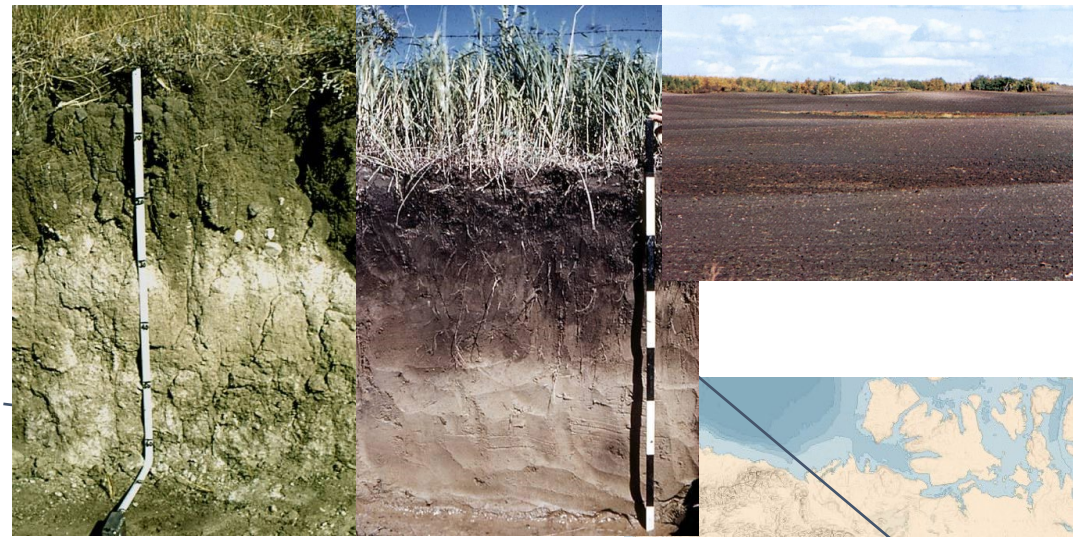
Vertisols

# Black Soils in South America

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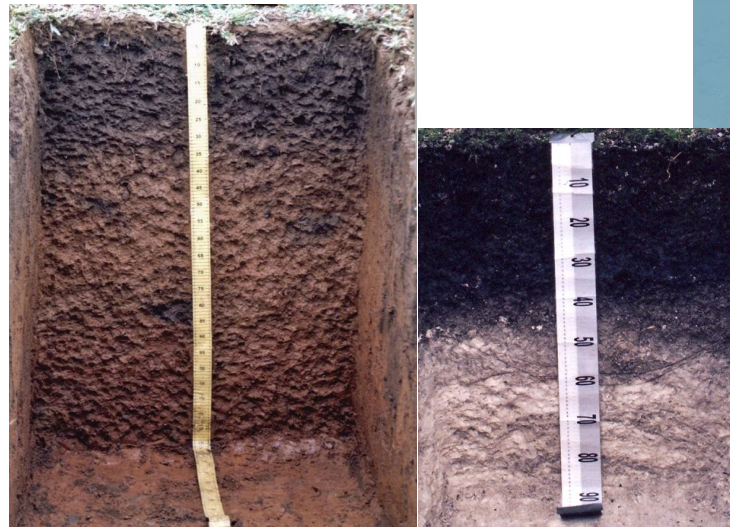




Brown and Black Chernozemic



Vertic Argiudoll



Typic Hapludoll

# Black Soils in North America

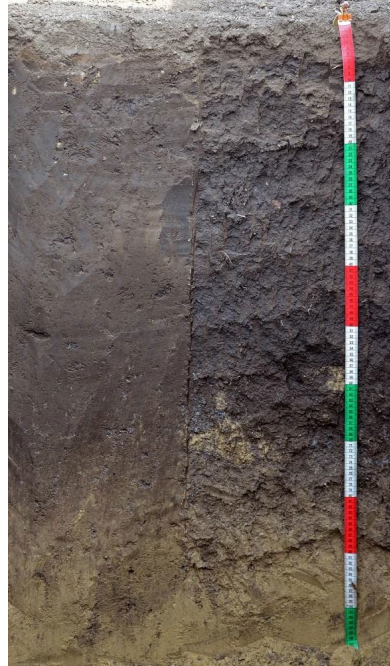
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Vertic Argiudoll

Brown and Black  
Chernozemic



Chernozem



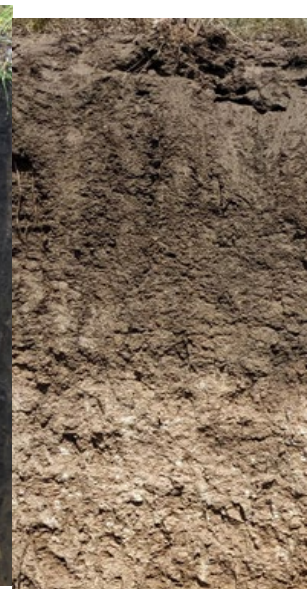
Gleyic Chernozem



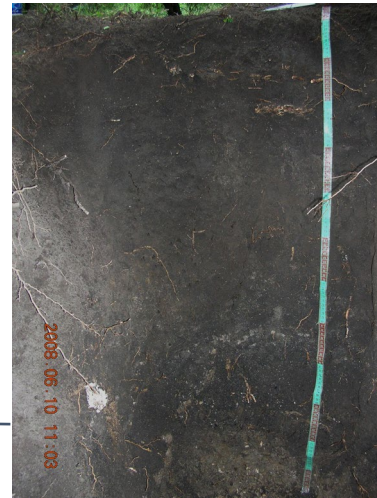
Gleyic Umbrisol



Haplic  
Chernozem



Haplic  
Kastanozem



Endocalcic Chernozem

Europe and  
Central Asia

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Chernozems



Kastanozems



Allophanic Andosol  
Regosolic Andosol

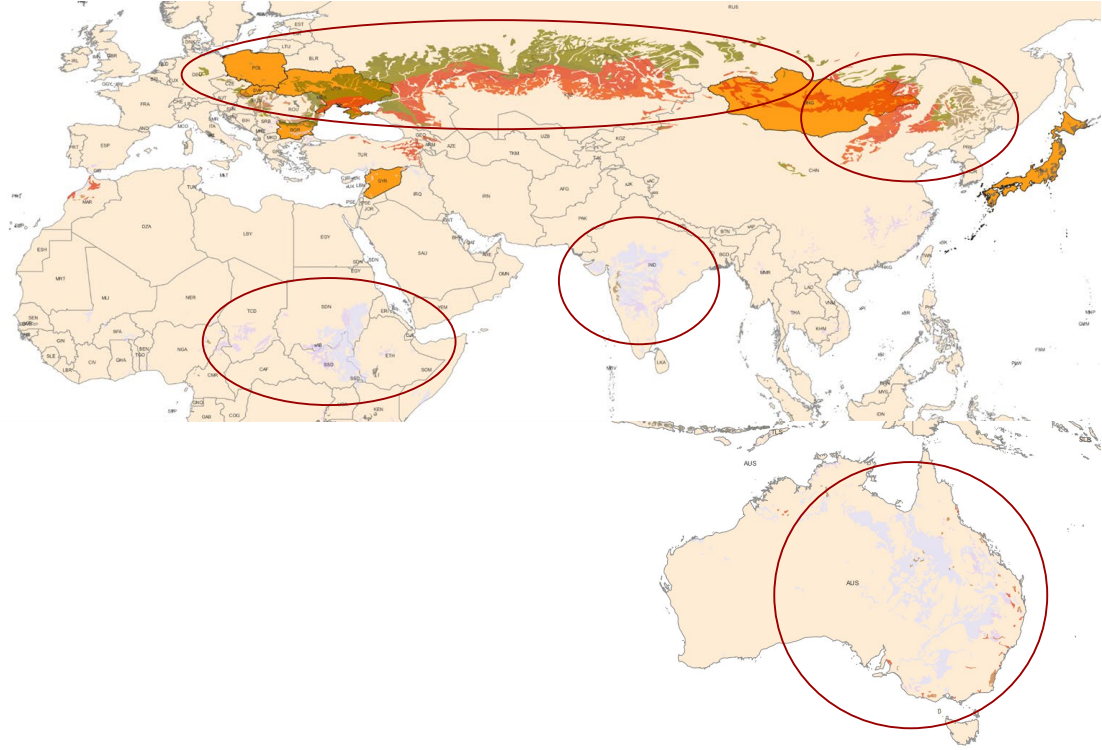
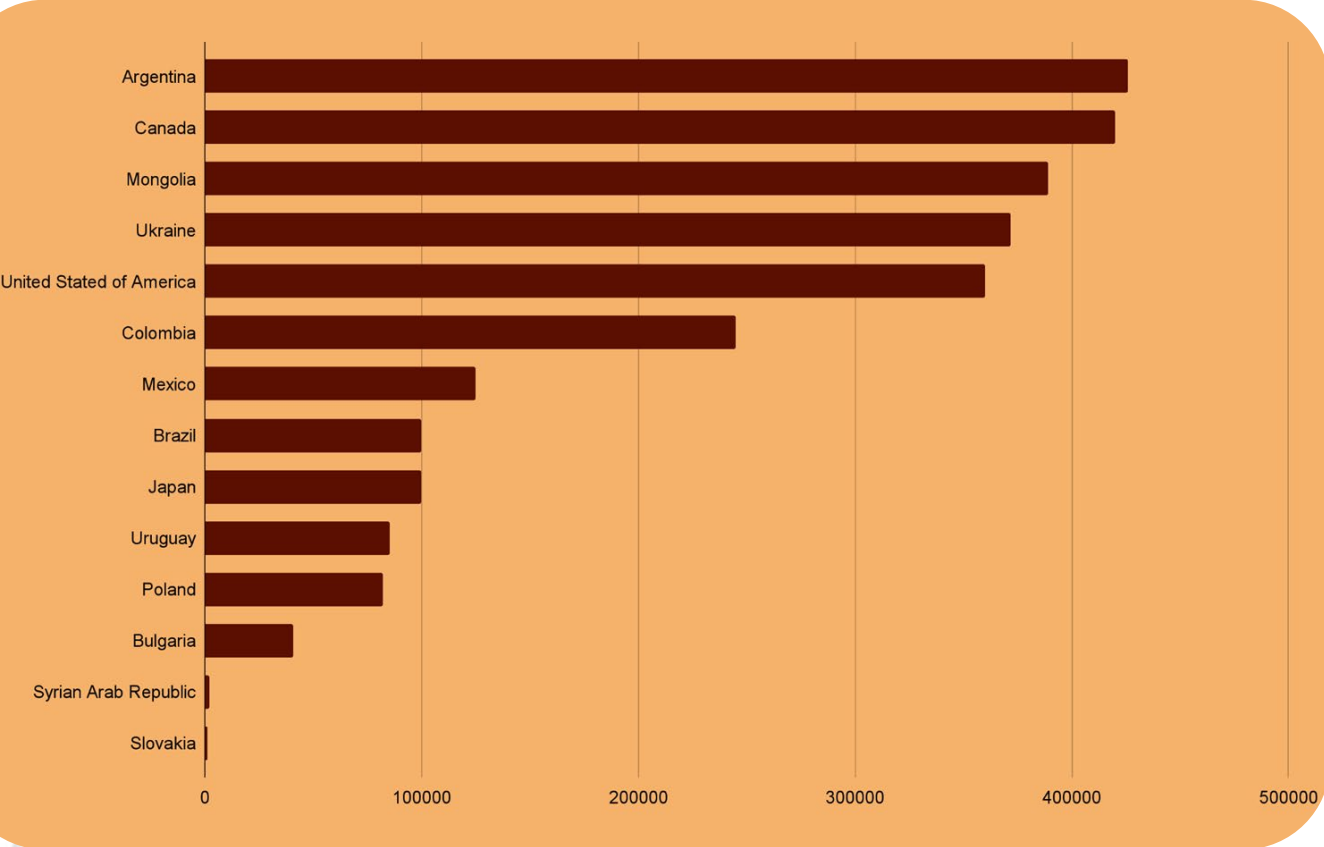


# Black Soils in Central and East Asia

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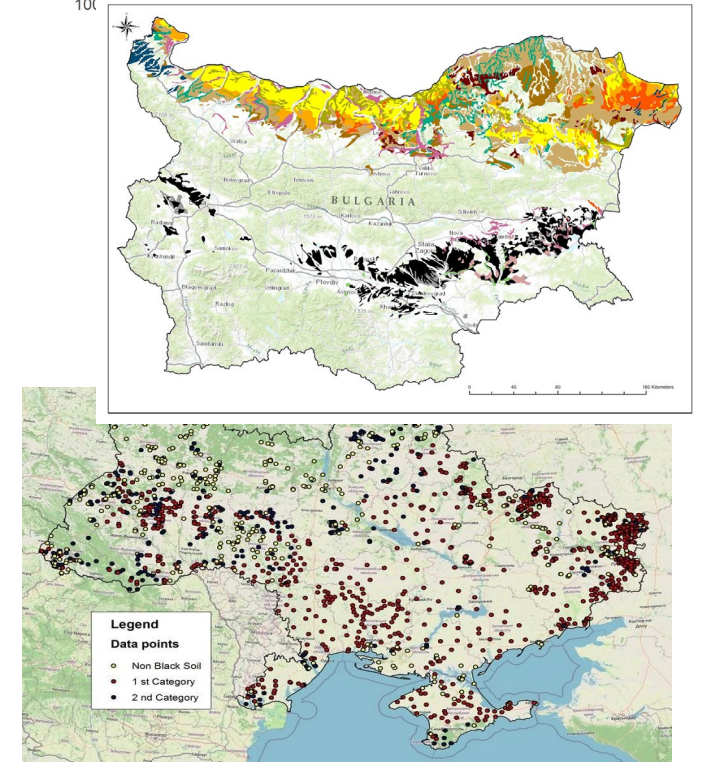
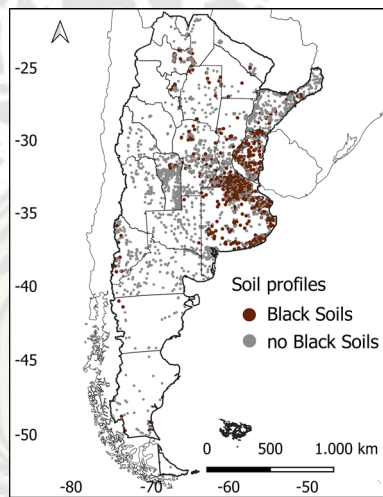
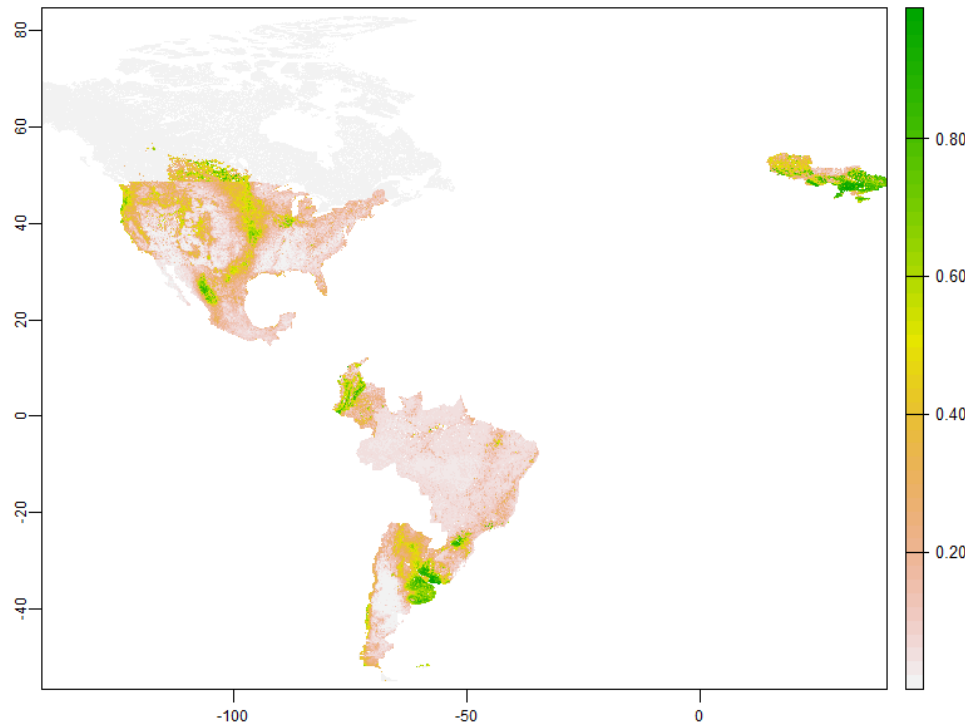
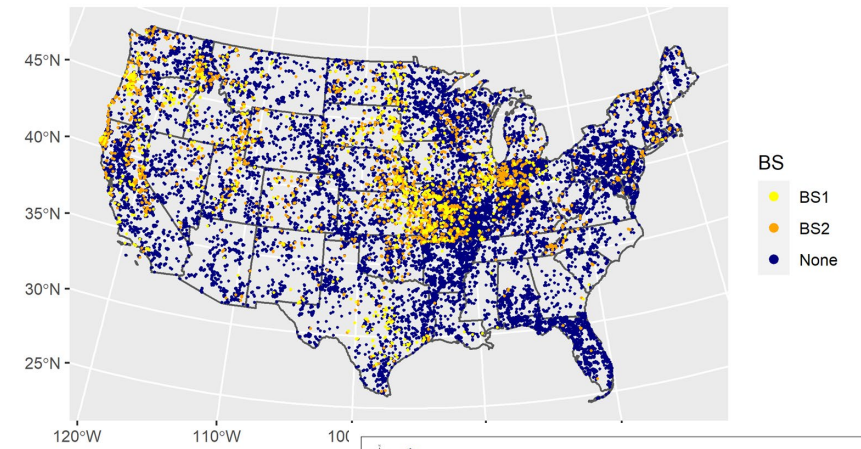
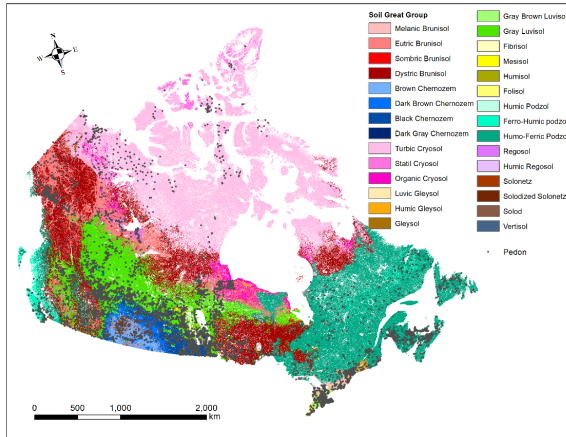


# Area of Black Soils ~2.7 M km<sup>2</sup>





# Probability of being a BS



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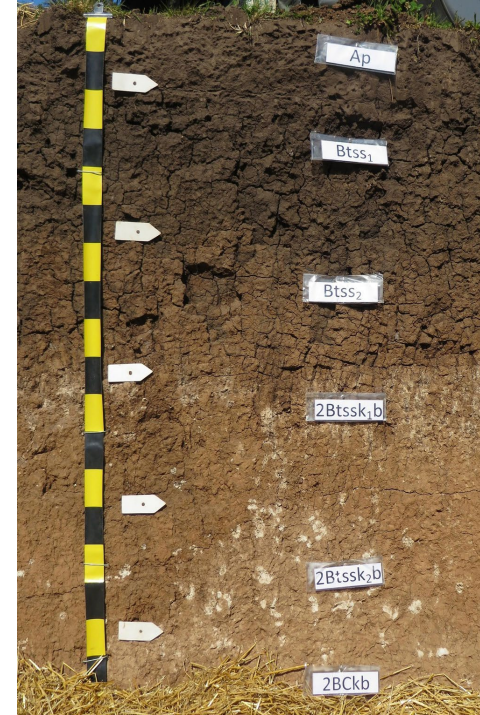




# 1<sup>st</sup> and 2<sup>nd</sup> categories of BS



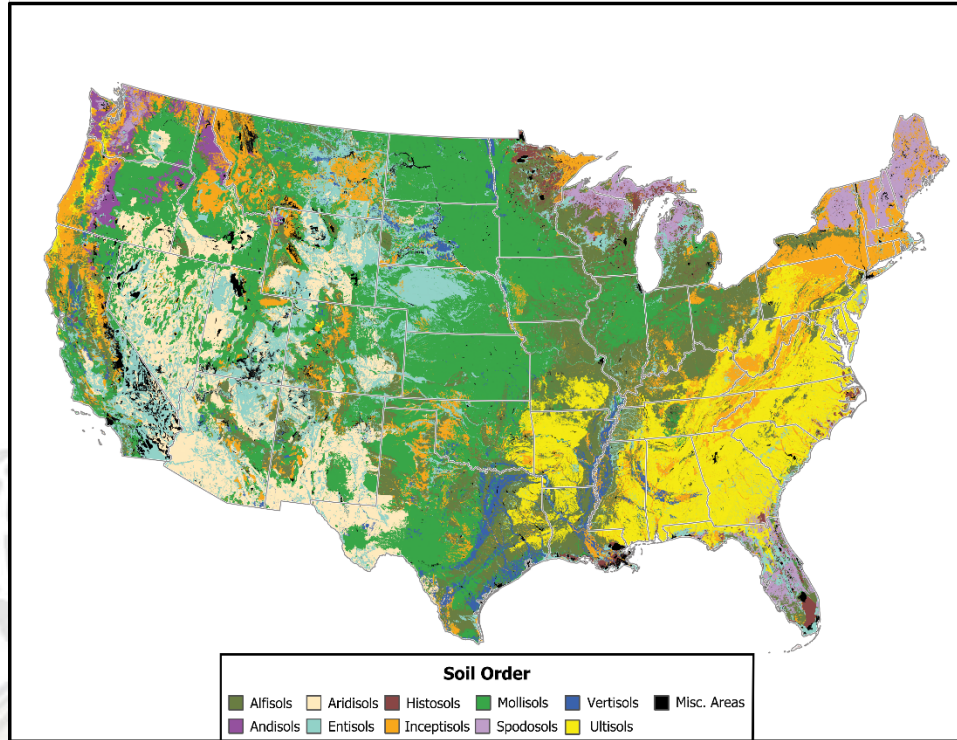
Vertisols  
1st category BS



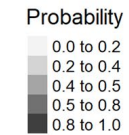
Phaeozems  
2nd category BS



# Polygon maps vs probability maps

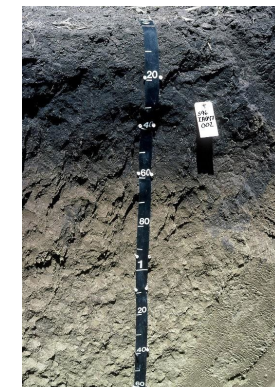
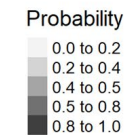
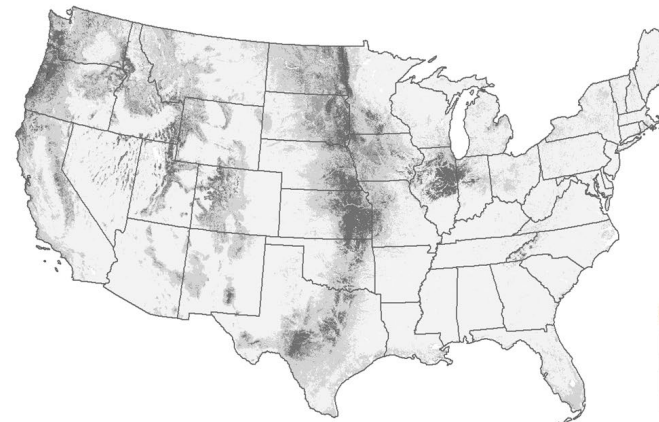


Category 1



Vertic Argiudoll

Category 2

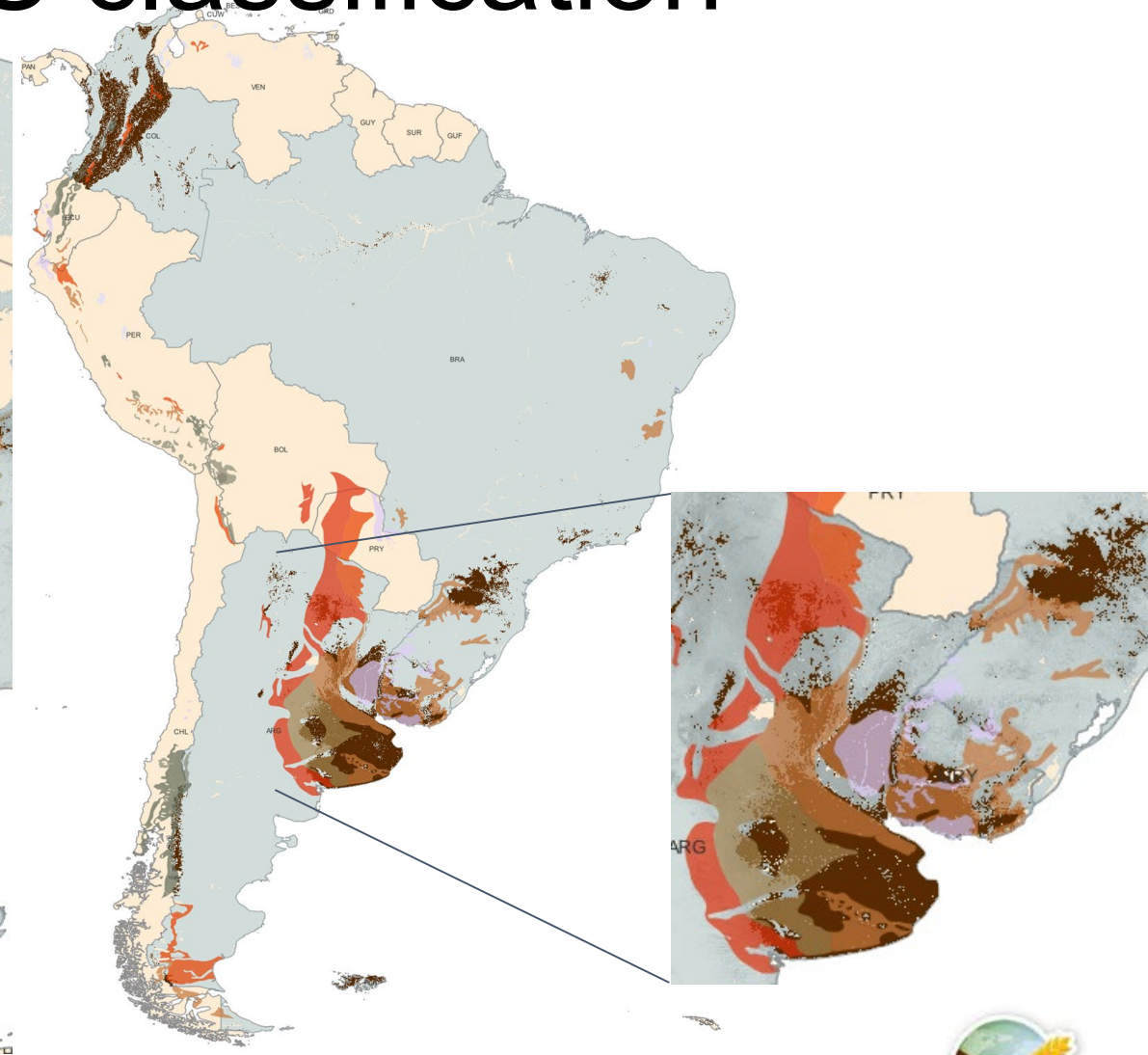
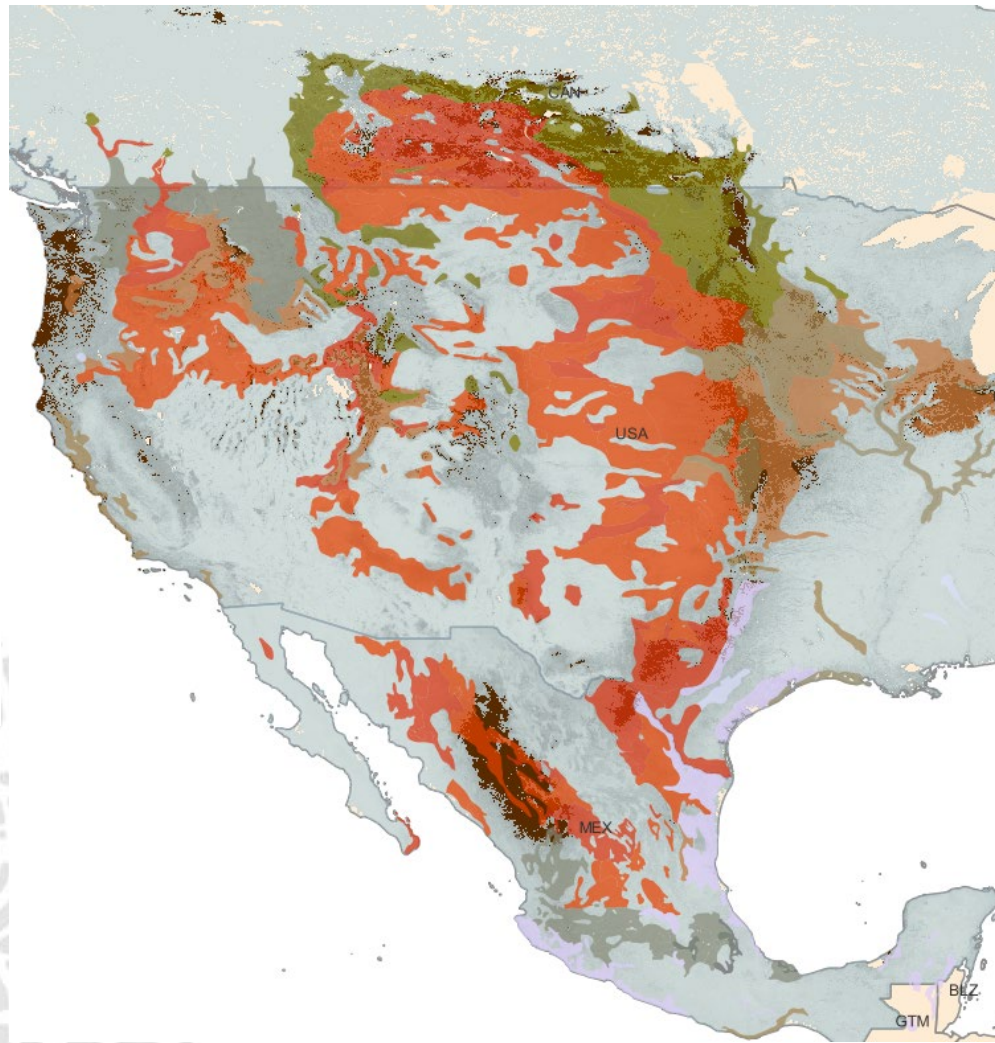


Typic Hapludoll



# Soil classifications vs BS classification

- C-CHERNOZEMS
- Cg-Glossic Chernozems
- Ch-Haplic Chernozems
- Ck-Calcic Chernozems
- Cl-Luvic Chernozems
- Hc-Calcaric Phaeozems
- Hg-Gleyic Phaeozems
- Hh-Haplic Phaeozems
- Hi-Luvic Phaeozems
- K-KASTAZNOZEMS
- Kh-Haplic Kastanozems
- Kk-Calcic Kastanozems
- Kl-Luvic Kastanozems
- Th-Humic Andosols
- Tm-Mollic Andosols
- To-Ochric Andosols
- Tv-Vitric Andosols
- V-VERTSOLS
- Vc-Chromic Vertisols
- Vp-Pellic Vertisols



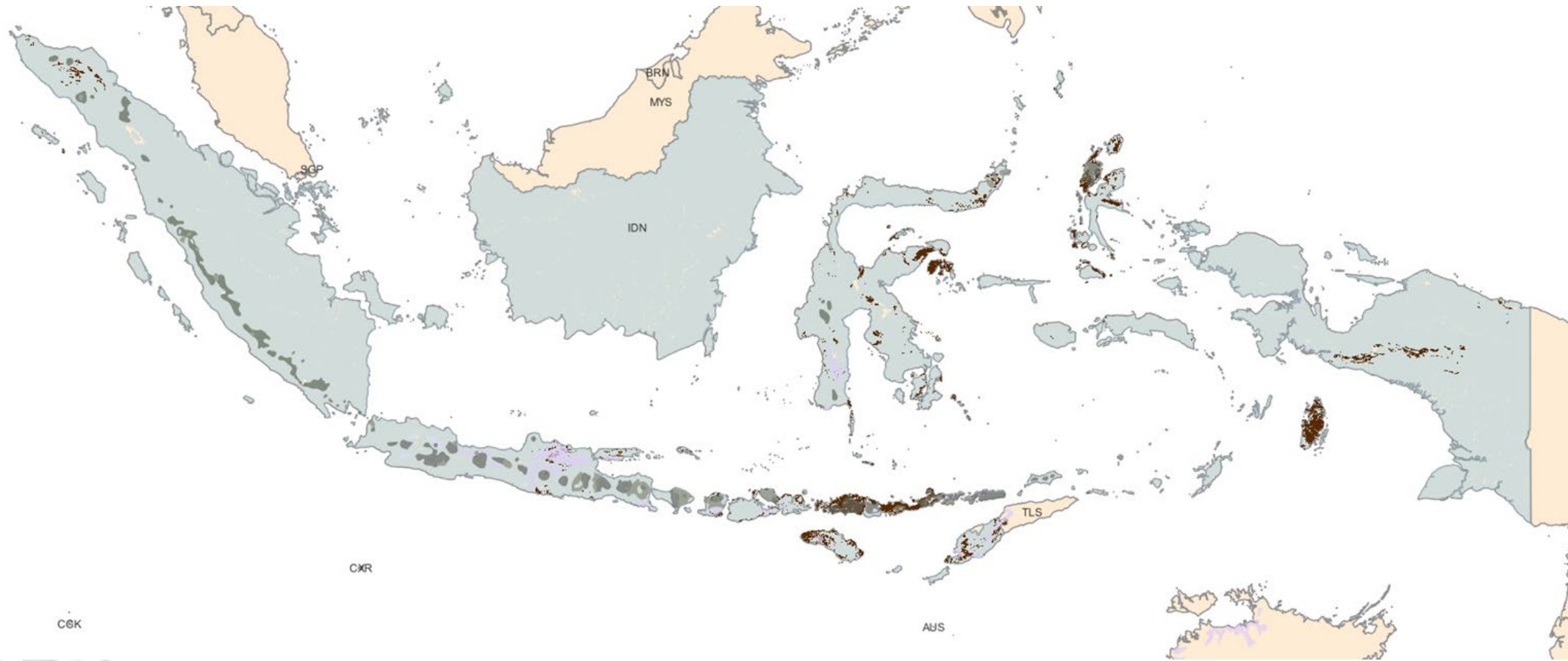
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- Kl-Luvic Kastanozems
- Th-Humic Andosols
- Tm-Mollic Andosols
- To-Ochric Andosols
- Tv-Vitric Andosols
- V-VERTSOLS
- Vc-Chromic Vertisols
- Vp-Pellic Vertisols



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The Global Soil Partnership (GSP) is a globally recognized mechanism established in 2012. Our mission is to position soils in the Global Agenda through collective action. Our key objectives are to promote Sustainable Soil Management (SSM) and improve soil governance to guarantee healthy and productive soils, and support the provision of essential ecosystem services towards food security and improved nutrition, climate change adaptation and mitigation, and sustainable development.

# Conclusions

- ✦ Black Soil distribution have not completely revealed, but now we know that they do not match the same spatial distribution than other soil categories
- ✦ 1<sup>st</sup> Category of BS does not necessarily represent more productive soils than 2<sup>nd</sup> Category of BS
- ✦ Probability maps were more informative that categorical maps



# Many Thanks to all contributors

Ademir Fontana  
Ana Laura Moreira  
Artur Łopatka  
Beata Labaz  
Boris Pálka  
Božena Smreczak  
Carlos Clerici  
Carlos Roberto Pinheiro Júnior  
Charles Ferguson  
David Lindbo  
de la Fuente J.C.  
Dimitrov Emil  
Fernando Fontes  
Flávio Pereira de Oliveira  
Geng X.\* He J.  
Gonzalo Pereira  
Gustavo de Mattos Vasques  
Hussam Hag Husein  
Joan Sebastian Gutiérrez Díaz  
Jozef Kobza  
Lady Marcela Rodríguez Jiménez  
LEBED Vitalii  
Lúcia Helena Cunha dos Anjos  
Luís Antônio Coutrim dos Santos

Marcos Gervasio Pereira  
Martin Dell'Acqua  
Martin Saksa  
Mario Guevara Santamaría  
Milton César Costa Campos  
Miteva Nevena  
Moretti L.M.  
NAKISKO Svitlana  
Napoleón Ordoñez Delgado  
Ochirbat Batkhisig  
Pedro Karin Serrato Alcaez  
Ricardo Simão Diniz Dalmolin  
Rodríguez D.M.  
Schulz G.A.  
Shishkov Toma  
Skye Wills  
SOLOVEI Vadym  
Stephen Roecker  
Suzann Kienast-Brown  
Tenti Vuegen L.M.  
VandenBygaart A.J.  
Verónica Reinoso de la Mora  
Yusuke TAKATA  
ZALAVSKYI Yurii