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Establishment of the International Research Institution of Black Soils (IRIBS)

建立国际黑土研究院

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3rd Workshop of the International Network of Black Soils | 13-14 December 2021



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Part 1

第一部分

Status of Black Soil

黑土现状



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Status of Black Soil 黑土现状

- ◆ Black soil is the most precious treasure given to mankind by nature, the most scarce land resource in the world, the great breadbasket of all mankind and the ballast stone to guarantee food security.
- ◆ Protecting the black soil so that it can maintain a healthy and stable food production capacity is an important guarantee to effectively alleviate the pressure of global hunger. To protect black soils is to protect the big breadbasket, to protect black soils is to protect ecological security, to protect black soils is to protect social stability, to protect black soils is to protect the healthy development of human beings, to protect black soils is to invest in the future.
- ◆ **黑土是大自然给予人类最为珍贵的宝藏，是世界上最为稀缺的土地资源，是全人类的大粮仓和保障粮食安全的压舱石。保护好黑土，使其能够保持健康持续稳定的粮食生产能力，是有效缓解全球饥饿压力的重要保障。**
- ◆ **保护黑土，就是保护大粮仓；保护黑土，就是保护生态安全；保护黑土，就是保护社会稳定；保护黑土，就是保护人类的健康发展；保护黑土，就是投资未来。**





Status of the World's Soil Resources report highlighted that black soils remain very sensitive to human intervention

- ◆ To illustrate, studies show that excessive cultivation and summer fallowing have caused a 50% decline in soil organic matter in the Canadian prairie soils, resulting in low nitrogen levels and poor surface structure.
- ◆ The amount of soil organic matter content in weak, medium and severely eroded Chernozems has declined by 15, 25, and 40%, respectively
- ◆ Soil organic matter decreased by 35.6%-52.5% after a long cropping period in Argentina, which demands the establishment of conservation practices to reduce future losses and a deterioration of soil quality
- ◆ Chinese Mollisols have experienced an average annual rate of decline in soil carbon in the 0- to 90-cm soil profile of 0.91%, 0.97% and 0.48% under mono-cropping system of corn, soybeans and wheat, respectively

《世界土壤资源现状报告》强调，黑土对人类干预仍然非常敏感

- 过度耕作导致加拿大草原土壤有机物下降了**50%**，导致氮含量降低，表面结构变差。
- 在薄弱、中等和严重侵蚀的乌克兰黑钙土中，土壤有机物含量分别下降了**15%、25%和40%**。
- 在阿根廷，经过长时间的种植后，土壤有机物下降了**35.6% ~ 52.5%**，这就要求建立保护措施，以减少未来的损失和土壤质量的恶化。
- 在中国黑土区玉米、大豆和小麦的单作系统下，0 ~ 90厘米土壤剖面的土壤碳平均每年下降了**0.91%、0.97%和0.48%**。

Status of Black Soil 黑土现状

- ◆ After more than 60 years of large-scale, high-intensity and overload utilization, some of the black soils have gradually become thinner and more degraded, and the physical properties of the soils have deteriorated, making them stiff in drought and sticky in floods, and significantly reducing their ability to store water and moisture, which affects ecological security and sustainable agricultural development. China is deeply aware of the urgent need to strengthen the protection, development, utilization and research of black soils, and has taken a series of effective measures to protect black soil, and achieved remarkable results.



中国黑土大规模开发始于上世纪五十年代中期，经过60余年大规模、高强度、超负荷的利用，部分黑土层逐渐变薄，退化日趋严重，土壤物理属性变差，旱时板结僵硬，涝时粘朽，蓄水保墒能力显著下降，影响生态安全和农业可持续发展。我国深刻认识到加强黑土保护、开发、利用和研究工作已刻不容缓，采取了一系列行之有效的措施来保护黑土，并取得显著成效。

The Chinese government attaches great importance to the protection and utilization of black soil resources

On 22 July, 2020, President Xi Jinping(China) pointed out during an inspection tour in Northeast China: “The Northeast is one of the three largest black soil regions in the world. They are the “Golden Corn Belt” and the “Hometown of Soybeans”. The problem of fertility overdraft at the same time. Effective measures must be taken to protect the black soils, the “panda in the arable land.”



中国政府高度重视黑土资源的保护和利用工作

2020年7月22日，中国国家主席习近平在中国东北考察时指出：“东北是世界三大黑土区之一，是“黄金玉米带”“大豆之乡”，黑土高产丰产，同时也面临着土地肥力透支的问题。一定要采取有效措施，保护好黑土地这一“耕地中的大熊猫”。



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Part 2

第二部分

Objectives, Goals, Mandate and
Rules of the IRIBS

国际黑土研究院
宗旨、目标、任务、框架

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Background

- During the 9th Plenary Assembly (PA) of the GSP, the People’s Government of Heilongjiang Province of China proposed to establish an International Research Institution of Black Soils (IRIBS) under the INBS.
- The institute would aim at capacity building and promoting international cooperation in research and knowledge exchange for sustainable use and management of black soil.
- The PA welcomed the proposal and appointed the INBS to discuss and delivery actions towards the establishment of the platform.



背景

- 在全球土壤伙伴关系第九届年会期间，中国黑龙江省人民政府提议在国际黑土联盟框架下设立国际黑土研究院（IRIBS）。
- 该机构旨在加强黑土国家研究和知识交流的国际合作，进而实现可持续利用和管理黑土的能力建设
- 全球土壤伙伴关系第九届年会对该建议表示欢迎，并委任国际黑土联盟进行讨论和实施国际黑土研究院的建立。





Objectives 目标

1. To support INBS's member countries through the implementation of INBS and GSP activities including the principles in the revised World Soil Charter and the recommendations in the Voluntary Guidelines for Sustainable Soil Management (VGSSM).

1. 支持粮农组织国际黑土联盟的成员国家：实施国际黑土联盟和全球土壤伙伴关系活动，包括《世界土壤宪章》中的原则和《可持续土壤管理自愿准则》中的建议。

2. To promote the exchange of knowledge, data and technical cooperation and experience among black soil countries by establishing the Black Soil Information System (BSIS) as direct contributor to the Global Soil Information System (GLOSIS) and under the framework of the International Network of Soil Information Institutions (INSII).

2. 促进知识、数据的交流：通过建立黑土信息系统支持粮农组织全球土壤信息系统，并在国际土壤信息机构网络的框架下，促进黑土国家之间的知识、数据、技术合作和经验交流。

3. To build the capacity of IRIBS's member countries on sustainable soil management following a demand driven approach where countries will determine the needs.

3. 培养国际黑土研究院成员国在以下方面的能力：按照需求导向原则，由各国来决定需求来建设成员国在可持续土壤管理方面的能力。

4. To encourage interdisciplinary and transdisciplinary targeted black soil research and management via research and development through technical cooperation using different approaches.

4. 鼓励跨学科和跨领域的黑土研究和管理：通过技术合作，采用不同的方法进行研究和开发。





The mission of IRIBS is to support INBS countries in achieving SSM. As facilitator to the development and implementation of black soil relevant projects, IRIBS will contribute to achieving GSP and INBS objectives, the Sustainable Development Goals, and other global targets related to the sustainable management of black soils

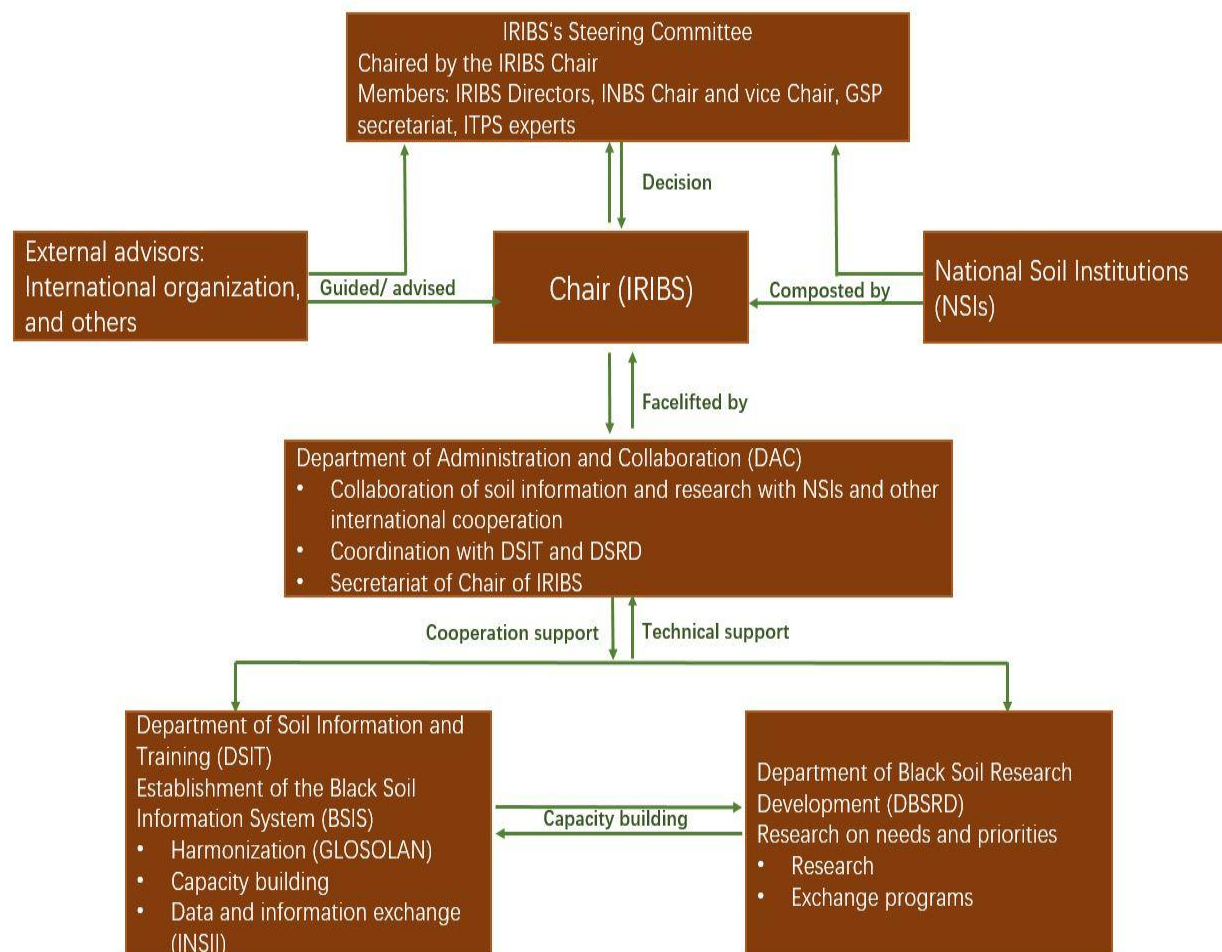
国际黑土研究院的使命是支持国际黑土联盟国家实现土壤可持续管理。作为黑土相关项目开发和实施的促进者，国际黑土研究院将为实现全球土壤伙伴关系和国际黑土联盟的目标、可持续发展目标以及其他与黑土可持续管理相关的全球目标作出贡献



- The activities carried out by IRIBS will be in line with the objectives and priorities identified by the INBS member countries during their annual meetings and with the work plan of the GSP.
- Activities will be implemented through the Department of Soil Information and Training (DSIT) and the Department of Soil Research and Development (DSRD), which will be established making use of existing bodies at the Heilongjiang Academy of Black Soil Conservation and Utilization (HABSCU). The Directors of these Departments will report to the Chair of IRIBS (who is appointed by the ABCCUHP).
- **国际黑土研究院所开展的活动将符合国际黑土联盟成员国在其年度会议上确定的目标和优先事项，并符合全球土壤伙伴关系的工作计划。**
- **活动将通过土壤信息与培训部和土壤研究与发展部实施，这两个部门将依托黑龙江省黑土保护与利用研究院的现有机构建立。**
- **这些部门的主任将向国际黑土研究院的主席（由ABCCUHP任命）报告。最后，国际黑土研究院的主任将与黑土国家土壤研究所成员的主任进行协调，以执行国家层面的活动。**



Structure and Function 结构和功能



In our proposed organizational structure, there is the Steering Committee, which will include the President and Director of the IRIBS, the President and Vice-President of the INBS, the coordinator of the FAO Secretariat, and the black soil experts of the ITPS. The IRIBS will invite the member institutes of the INBS to participate. And, as shown on the left framework, the IRIBS will include three departments to assist the activities of the INBS.

结构和功能:

在我们的建议的组织架构中包括指导委员会，成员将包括国际黑土研究院主席、主任、国际黑土联盟主席和副主席，粮农组织秘书处协调员，以及政府间土壤技术专家组黑土专家。

国际黑土研究院将邀请国际黑土联盟的成员国研究所参加。

并如图所示，将包括三个下设部门协助国际黑土联盟的各项活动。



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Part 3

第三部分

Work Plan

下一步工作计划

3rd Workshop of the International Network of Black Soils | 13-14 December 2021



Proposed Action Plan:

Launch event the International Research Institution of Black Soils (IRIBS) in March 2022

Department of Administration and Collaboration (DAC)

Together with INBS organize annual workshop and perform progress report to member countries and partners

Department of Soil Information and Training (DSIT)

Build capacities of soil laboratories and monitoring stations in black soil countries in line with GSP's GLOSOLAN activities, though trainings and equipment facility supporting;

Build capacities of soil information system in black soil countries in line with GSP's INSII activities including development of the Global Black Soil Distribution Map (GBSmap), though trainings;

Department of Black Soil Research Development (DBSRD)

Organize workshops or webinars at least once per year on sustainable black soil management for technical and scientific knowledge exchange.

Support member countries to develop the Report of Global Status of Black Soils

以下是国际黑土研究院的拟议计划:

在2022年三月举办国际黑土研究院启动仪式

行政与合作部 (DAC)

- 与INBS一起组织年度研讨会，并向成员国和合作伙伴进行进度报告

土壤信息和培训部 (DSIT)

- 根据GSP的GLOSOLAN活动，通过培训和设备支持，协助黑土国家建立土壤实验室和监测站。

- 通过培训，协助黑土国家建立土壤信息系统。

黑土研究和发展部 (DBSRD)

- 每年至少组织一次关于可持续黑土管理的研讨会或网络研讨会，进行技术和科学知识交流。

- 支持成员国编写《全球黑土状况报告》。



- Chinese government attaches great importance to black soil conservation initiatives
- 中国政府非常重视黑土保护举措
- President Xi Jinping emphasized that effective measures should be taken to effectively protect and utilize black soils, the "giant panda of arable land"
- 习近平总书记强调，采取有效措施切实把黑土地这个“耕地中的大熊猫”保护好、利用好
- Heilongjiang Province established the Heilongjiang Academy of Black Soil Conservation and Utilization(HABSCU)
- 黑龙江省成立了黑土保护利用研究院来促进黑土地可持续管理
- Please join the IRIBS to achieve the global black soil management and conservation
- 请加入我们的国际黑土研究院，携手努力实现全球黑土管理和保护





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谢谢
*Thank you for
your attention*

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