**Biến đổi khí hậu tác động đến nông nghiệp**

Biến đổi khí hậu, đó là sự nóng lên của trái đất mà biểu hiện cụ thể là nhiệt độ mùa hè tăng cao với những đợt nắng nóng gay gắt; bão, gió, lũ lụt xuất hiện ngày càng nhiều với mức độ ngày càng khốc liệt; hạn hán xảy ra ở nhiều nơi… Biến đổi khí hậu không chỉ gây ra các hiện tượng thời tiết cực đoan như mưa đá, hạn hán, lũ lụt... mà nó còn ảnh hưởng nặng nề đến lĩnh vực nông nghiệp, có thể còn dẫn đến mất mùa hoàn toàn. Biến đổi khí hậu đã và đang tác động mạnh mẽ đến ngành trồng trọt, rõ ràng nhất là làm giảm diện tích đất canh tác, gây ra tình trạng hạn hán và sâu bệnh, gây áp lực lớn cho sự phát triển của ngành trồng trọt nói riêng và ngành nông nghiệp nói chung.

Để hiểu rõ hơn Cục Thông tin KH&CN quốc gia xin giới thiệu một số bài nghiên cứu đã được xuất bản chính thức và các bài viết được chấp nhận đăng trên những cơ sở dữ liệu học thuật chính thống.



**1. Sciencedirect**

1. Some like it hot: Thermal preference of the groundwater amphipod Niphargus longicaudatus (Costa, 1851) and climate change implications  
Journal of Thermal Biology Available online 13 July 2023 In press, journal pre-proof Article 103654  
Mattia Di Cicco, Tiziana Di Lorenzo, Diana Maria Paola Galassi  
<https://www.sciencedirect.com/science/article/pii/S030645652300195X/pdfft?md5=a475894cdde8c0fa28b57910a244017c&pid=1-s2.0-S030645652300195X-main.pdf>

2. The time of emergence of climate-induced hydrologic change in Australian rivers  
Journal of Hydrology 11 March 2023 Volume 619 (Cover date: April 2023) Article 129371  
Andrew John, Rory Nathan, J. Angus Webb  
<https://www.sciencedirect.com/science/article/pii/S002216942300313X/pdfft?md5=b68891864900f857aa8ef57a8cd7197c&pid=1-s2.0-S002216942300313X-main.pdf>

3. Limited potential of irrigation to prevent potato yield losses in Germany under climate change  
Agricultural Systems 14 March 2023 Volume 207 (Cover date: April 2023) Article 103633  
Sabine Egerer, Andrea Fajardo Puente, Uwe A. Schneider  
<https://www.sciencedirect.com/science/article/pii/S0308521X23000380/pdfft?md5=963dee3c699bdfad065e420778b883c1&pid=1-s2.0-S0308521X23000380-main.pdf>

4. Soil organic carbon sequestration potential for croplands in Finland over 2021–2040 under the interactive impacts of climate change and agricultural management  
Agricultural Systems 4 May 2023 Volume 209 (Cover date: June 2023) Article 103671  
Fulu Tao, Taru Palosuo, Raisa Mäkipää  
<https://www.sciencedirect.com/science/article/pii/S0308521X23000768/pdfft?md5=81827b1551688e4577f50f1853e45204&pid=1-s2.0-S0308521X23000768-main.pdf>

5. Phytoplankton adaptive resilience to climate change collapses in case of extreme events – A modeling study  
Ecological Modelling 21 June 2023 Volume 483 (Cover date: September 2023) Article 110437  
Boris Sauterey, Guillaume Le Gland, Sergio M. Vallina  
<https://www.sciencedirect.com/science/article/pii/S0304380023001680/pdfft?md5=0854292ec0fb90da78ae9c42180f33e9&pid=1-s2.0-S0304380023001680-main.pdf>

6. Measuring the impacts of climate change on the spatial structure of grasslands in urban landscapes of North America  
Urban Forestry & Urban Greening 12 June 2023 Volume 86 (Cover date: August 2023) Article 128000  
Amin Rastandeh, Meghann Jarchow  
<https://www.sciencedirect.com/science/article/pii/S1618866723001711/pdfft?md5=7d14de4e14e1da2041e0d7768122a7e9&pid=1-s2.0-S1618866723001711-main.pdf>

7. Climate change rather than vegetation greening dominates runoff change in China  
Journal of Hydrology 13 April 2023 Volume 620, Part B (Cover date: May 2023) Article 129519  
Zhihong Song, Jun Xia, Shilong Piao  
<https://www.sciencedirect.com/science/article/pii/S0022169423004614/pdfft?md5=9d04fe00c52367271aa8741d4a177b55&pid=1-s2.0-S0022169423004614-main.pdf>

8. Marine protected areas in a changing ocean: Adaptive management can mitigate the synergistic effects of local and climate change impacts  
Biological Conservation 20 April 2023 Volume 282 (Cover date: June 2023) Article 110048  
Yanis Zentner, Graciel·la Rovira, Cristina Linares  
<https://www.sciencedirect.com/science/article/pii/S0006320723001490/pdfft?md5=eef49b0193d2d3c39e034e4da0e8e4c0&pid=1-s2.0-S0006320723001490-main.pdf>

9. Eco-socio-economic vulnerability assessment of Portuguese fisheries to climate change  
Ecological Economics 8 July 2023 Volume 212 (Cover date: October 2023) Article 107928  
Miguel Pinto, Marta Albo-Puigserver, Francisco Leitão  
<https://www.sciencedirect.com/science/article/pii/S092180092300191X/pdfft?md5=39c37a9a9aa5fb3cfaa654a67d3e8fd2&pid=1-s2.0-S092180092300191X-main.pdf>

10. Climate change adaptation and fishers’ subjective well-being in Indonesia: Is there a link?  
Regional Studies in Marine Science 27 May 2023 Volume 63 (Cover date: October 2023) Article 103030  
Moh Shadiqur Rahman, Wen-Chi Huang, Moh Saeri  
<https://www.sciencedirect.com/science/article/pii/S2352485523002190/pdfft?md5=daaf9b67026a45d53a02ce71ef2256d8&pid=1-s2.0-S2352485523002190-main.pdf>

11. Climate change, international migration, and interstate conflicts  
Ecological Economics 26 May 2023 Volume 211 (Cover date: September 2023) Article 107890  
Cristina Cattaneo, Timothy Foreman  
<https://www.sciencedirect.com/science/article/pii/S0921800923001532/pdfft?md5=4246d7f8fb055689e088433404b6f159&pid=1-s2.0-S0921800923001532-main.pdf>

12. Assessment of the potential impacts of climate changes on Syr Darya watershed: A hybrid ensemble analysis method  
Journal of Hydrology: Regional Studies 22 May 2023 Volume 47 (Cover date: June 2023) Article 101415  
Xiaobo Zhai, Yongping Li, Yanfeng Li  
<https://www.sciencedirect.com/science/article/pii/S2214581823001027/pdfft?md5=d959ce5b041312370f8e660acb56e2e0&pid=1-s2.0-S2214581823001027-main.pdf>

13. Climate change-induced aridity is affecting agriculture in Northeast Italy  
Agricultural Systems 5 April 2023 Volume 208 (Cover date: May 2023) Article 103647  
Eugenio Straffelini, Paolo Tarolli  
<https://www.sciencedirect.com/science/article/pii/S0308521X23000525/pdfft?md5=301d79d12700d329f611c1babc01e092&pid=1-s2.0-S0308521X23000525-main.pdf>

14. Modeling the impact of urbanization and climate changes on terrestrial vegetation productivity in China by a neighborhood substitution analysis  
Ecological Modelling 14 May 2023 Volume 482 (Cover date: August 2023) Article 110405  
Zilong Qin, Zongyao Sha  
<https://www.sciencedirect.com/science/article/pii/S0304380023001369/pdfft?md5=ac9963a42190156457a22ea078c6ab20&pid=1-s2.0-S0304380023001369-main.pdf>

15. Disentangling the relative effects of climate change and anthropogenic activities on paddy expansion in the northern Sanjiang Plain of China  
Ecological Indicators 1 July 2023 Volume 154 (Cover date: October 2023) Article 110543  
Dan Liu, Wenfeng Chen, Linna Li  
<https://www.sciencedirect.com/science/article/pii/S1470160X23006854/pdfft?md5=64b2c8cfb2245fd34b99b32c52ef448d&pid=1-s2.0-S1470160X23006854-main.pdf>

16. A mathematical model of the impacts of climate change on the winter tick epizootic in moose  
Ecological Modelling 7 June 2023 Volume 483 (Cover date: September 2023) Article 110421  
David C. Elzinga,Charlotte Beckford, W. Christopher Strickland  
<https://www.sciencedirect.com/science/article/pii/S0304380023001527/pdfft?md5=97b2d548c9f7923511571961fe93672a&pid=1-s2.0-S0304380023001527-main.pdf>

17. Modelling interactions between cowpea cover crops and residue retention in Australian dryland cropping systems under climate change  
Agriculture, Ecosystems & Environment 25 April 2023 Volume 353 (Cover date: 1 September 2023) Article 108536  
Qinsi He, De Li Liu, Qiang Yu  
<https://www.sciencedirect.com/science/article/pii/S0167880923001950/pdfft?md5=3fe00afd023dd16d47d30bfa16c4c014&pid=1-s2.0-S0167880923001950-main.pdf>

18. Climate change and its impacts on Vietnam agriculture: A macroeconomic perspective  
Ecological Informatics 30 December 2022 Volume 74 (Cover date: May 2023) Article 101960  
Dao Le Trang Anh, Nguyen Tuan Anh, Abbas Ali Chandio  
<https://www.sciencedirect.com/science/article/pii/S1574954122004101/pdfft?md5=1003c4798c34c4a0835679dd34544577&pid=1-s2.0-S1574954122004101-main.pdf>

19. Impacts of land use/land cover and climate change on hydrological cycle in the Xiaoxingkai Lake Basin  
Journal of Hydrology: Regional Studies 16 May 2023 Volume 47 (Cover date: June 2023) Article 101422  
Feiyan Xiao, Xunming Wang, Congsheng Fu  
<https://www.sciencedirect.com/science/article/pii/S221458182300109X/pdfft?md5=8856c70a698fb17675b72a72d2f1c70d&pid=1-s2.0-S221458182300109X-main.pdf>

20. Incorporating intraspecific variation into species distribution models improves climate change analyses of a widespread West African tree species (Pterocarpus erinaceus Poir, Fabaceae)  
Global Ecology and Conservation 7 June 2023 Volume 45 (Cover date: September 2023) Article e02538  
Séverin Biaou, Gérard Nounagnon Gouwakinnou, Honoré Samadori Sorotori Biaou  
<https://www.sciencedirect.com/science/article/pii/S2351989423001737/pdfft?md5=7ad0ab86fb291685e7bc021bfd4f0fe7&pid=1-s2.0-S2351989423001737-main.pdf>

21. Vegetation carbon input moderates the effects of climate change on topsoil organic carbon in China  
CATENA 4 May 2023 Volume 228 (Cover date: July 2023) Article 107188  
Yunfeng Cen, Yongcai Lou, Yonghong Li  
<https://www.sciencedirect.com/science/article/pii/S0341816223002795/pdfft?md5=459dad5237df0d95882969f7ae5439f3&pid=1-s2.0-S0341816223002795-main.pdf>

22. Roles of reservoirs in regulating basin flood and droughts risks under climate change: Historical assessment and future projection  
Journal of Hydrology: Regional Studies 20 June 2023 Volume 48 (Cover date: August 2023) Article 101453  
Jingxuan Sun, Wei Chen, Zheng Song  
<https://www.sciencedirect.com/science/article/pii/S2214581823001404/pdfft?md5=20615c40c18adda325a5d751152f0c07&pid=1-s2.0-S2214581823001404-main.pdf>

23. The salinization process and its response to the combined processes of climate change–human activity in the Yellow River Delta between 1984 and 2022  
CATENA 27 June 2023 Volume 231 (Cover date: October 2023) Article 107301  
Bing Guo, Yifeng Liu, Hongwei Wu  
<https://www.sciencedirect.com/science/article/pii/S0341816223003922/pdfft?md5=b69f3b49e2ea00becaf12362a41b52b5&pid=1-s2.0-S0341816223003922-main.pdf>

24. Assessing the vulnerability of grasslands in Gannan of China under the dual effects of climate change and human activities  
Ecological Indicators 6 March 2023 Volume 148 (Cover date: April 2023) Article 110100  
Wen-Wen Guo, Lei Jin, Wen-Ting Wang  
<https://www.sciencedirect.com/science/article/pii/S1470160X2300242X/pdfft?md5=8c26b32ec3aed7cfbca5479e71514564&pid=1-s2.0-S1470160X2300242X-main.pdf>

25. Future changes in water resources, floods and droughts under the joint impact of climate and land-use changes in the Chao Phraya basin, Thailand  
Journal of Hydrology 28 March 2023 Volume 620, Part A (Cover date: May 2023) Article 129454  
Shuyu Yang, Baoxu Zhao, Jerasorn Santisirisomboon  
<https://www.sciencedirect.com/science/article/pii/S0022169423003967/pdfft?md5=1810f2732f7362b025cc4074f0a23935&pid=1-s2.0-S0022169423003967-main.pdf>

26. Growing control of climate change on water scarcity alleviation over northern part of China  
Journal of Hydrology: Regional Studies 2 February 2023 Volume 46 (Cover date: April 2023) Article 101332  
Zhongwei Huang, Xing Yuan, Qiuhong Tang  
<https://www.sciencedirect.com/science/article/pii/S2214581823000198/pdfft?md5=5be4b7bc8dcfa9910ffd1064ae8db884&pid=1-s2.0-S2214581823000198-main.pdf>

27. Attribution of climate change and human activities to vegetation NDVI in Jilin Province, China during 1998–2020  
Ecological Indicators 29 May 2023 Volume 153 (Cover date: September 2023) Article 110415  
Yating Ren, Feng Zhang, Zhiqiang Cheng  
<https://www.sciencedirect.com/science/article/pii/S1470160X23005575/pdfft?md5=f77403b1aad90e45dbb0b4e617f1dea8&pid=1-s2.0-S1470160X23005575-main.pdf>

28. Concurrent response of tree growth and grain productivity to climate change: A case study from climatic transition zone in central China  
Ecological Indicators 6 July 2023 Volume 154 (Cover date: October 2023) Article 110608  
Jianfeng Peng, Kunyu Peng, Jiaxin Li  
<https://www.sciencedirect.com/science/article/pii/S1470160X23007501/pdfft?md5=2c2c38d035355c95a6ab1aceb339962f&pid=1-s2.0-S1470160X23007501-main.pdf>

29. Mitigation pathways towards climate change: Modelling the impact of climatological factors on wheat production in top six regions of China  
Ecological Modelling 15 April 2023 Volume 481 (Cover date: July 2023) Article 110381  
Abbas Ali Chandio, Devi Prasad Dash, Yuansheng Jiang  
<https://www.sciencedirect.com/science/article/pii/S0304380023001126/pdfft?md5=408b4dcc46c118a321083bcceb7590fb&pid=1-s2.0-S0304380023001126-main.pdf>

30. Nature-based solutions for climate change mitigation: Assessing the Scottish Public's preferences for saltmarsh carbon storage  
Ecological Economics 31 May 2023 Volume 211 (Cover date: September 2023) Article 107863  
Simone Riegel, Laure Kuhfuss, Timothy Stojanovic  
<https://www.sciencedirect.com/science/article/pii/S092180092300126X/pdfft?md5=afb6fe2e8518484683d7366bf8e20fe8&pid=1-s2.0-S092180092300126X-main.pdf>

31. Implementation of conservation agricultural practices as an effective response to mitigate climate change impact and boost crop productivity in Nigeria  
Journal of Agriculture and Food Research 21 March 2023 Volume 12 (Cover date: June 2023) Article 100557  
Adetomiwa Kolapo, Adeyera James Kolapo  
<https://www.sciencedirect.com/science/article/pii/S2666154323000649/pdfft?md5=9018cc3af412709e956d0f82b7de399e&pid=1-s2.0-S2666154323000649-main.pdf>

32. Integrating multiple comparison methods for attributing hydrological drought evolution and drought propagation: The impact of climate change cannot be ignored  
Journal of Hydrology 25 April 2023 Volume 621 (Cover date: June 2023) Article 129557  
Te Zhang, Xiaoling Su, Lianzhou Wu  
<https://www.sciencedirect.com/science/article/pii/S0022169423004997/pdfft?md5=7554fb9ebb9c527d2f4ddf9c99664220&pid=1-s2.0-S0022169423004997-main.pdf>

33. Dramatic loss of seagrass Zostera marina L. suitable habitat under projected climate change in coastal areas of the Bohai Sea and Shandong peninsula, China  
Journal of Experimental Marine Biology and Ecology 19 May 2023 Volume 565 (Cover date: August 2023) Article 151915  
Jian-Yu Dong, Meiyu Guo, Pei-Dong Zhang  
<https://www.sciencedirect.com/science/article/pii/S0022098123000473/pdfft?md5=4aa47c63d0b279a4cd2e3d714d09bdb7&pid=1-s2.0-S0022098123000473-main.pdf>

34. Are carbon-storing soils more sensitive to climate change? A laboratory evaluation for agricultural temperate soils  
Soil Biology and Biochemistry 14 May 2023 Volume 183 (Cover date: August 2023) Article 109043  
Tchodjowiè P. I. Kpemoua, Sarah Leclerc, Claire Chenu  
<https://www.sciencedirect.com/science/article/pii/S0038071723001050/pdfft?md5=ce67662739b3d7376427b4c1e62178b8&pid=1-s2.0-S0038071723001050-main.pdf>

35. Harmonizing manure and mineral fertilizers can mitigate the impact of climate change on crop yields  
Agriculture, Ecosystems & Environment 19 April 2023 Volume 352 (Cover date: 15 August 2023) Article 108526  
Xiaopeng Shi, Ning Chai, Feng Zhang  
<https://www.sciencedirect.com/science/article/pii/S0167880923001858/pdfft?md5=b74b228e025aea3b8d1c0ca2792ce427&pid=1-s2.0-S0167880923001858-main.pdf>

36. Does the supply response of maize suffer from climate change in Bangladesh? Empirical evidence using ARDL approach  
Journal of Agriculture and Food Research 13 June 2023 Volume 14 (Cover date: December 2023) Article 100667  
Mst Noorunnahar, Farhana Arefeen Mila, Farha Tamanna Ila Haque  
<https://www.sciencedirect.com/science/article/pii/S2666154323001746/pdfft?md5=68bc820db3e4fff317832c0083ef2852&pid=1-s2.0-S2666154323001746-main.pdf>

37. Annual cumulative ambient precipitation determines the effects of climate change on biomass and yield of three important field crops  
Field Crops Research 25 November 2022 Volume 290 (Cover date: 1 January 2023) Article 108766  
Ireen Drebenstedt, Sven Marhan, Petra Högy  
<https://www.sciencedirect.com/science/article/pii/S0378429022003379/pdfft?md5=053af3b1aa6ed41c6d04be737835ae3b&pid=1-s2.0-S0378429022003379-main.pdf>

38. Do climate change and political instability affect crop production in sub-Saharan Africa countries?  
Journal of Agriculture and Food Research 1 April 2023 Volume 12 (Cover date: June 2023) Article 100576  
Milkessa Asfew, Fikadu Mitiku, Tsega Lemma  
<https://www.sciencedirect.com/science/article/pii/S2666154323000832/pdfft?md5=6606d176b97c3f243bc60ce796143f9c&pid=1-s2.0-S2666154323000832-main.pdf>

39. Contribution of climate change and vegetation restoration to interannual variability of evapotranspiration in the agro-pastoral ecotone in northern China  
Ecological Indicators 17 June 2023 Volume 154 (Cover date: October 2023) Article 110485  
Xuliang Li, Xuefeng Xu, Chansheng He  
<https://www.sciencedirect.com/science/article/pii/S1470160X23006271/pdfft?md5=0a99d10666f4b431751babb10252ea53&pid=1-s2.0-S1470160X23006271-main.pdf>

40. Elevational shift of endangered European yew under climate change in Hyrcanian mountain forests: Rethinking conservation-restoration strategies and management  
Forest Ecology and Management 2 December 2022 Volume 529 (Cover date: 1 February 2023) Article 120693  
Shirin Mahmoodi, Kourosh Ahmadi, Brandon Heung  
<https://www.sciencedirect.com/science/article/pii/S0378112722006879/pdfft?md5=2f0e06e3b80658d33148738af818278a&pid=1-s2.0-S0378112722006879-main.pdf>

41. Long-term responses in different karst agricultural production systems to farm management and climate change: A comparative prefecture-scale study in Southwest China  
Agriculture, Ecosystems & Environment 4 April 2023 Volume 352 (Cover date: 15 August 2023) Article 108504  
Yetong Li, Zhuodong Zhang, Guopeng Wang  
<https://www.sciencedirect.com/science/article/pii/S0167880923001639/pdfft?md5=6e3f2a4d5bbf5f3e876ed76d53b8ff75&pid=1-s2.0-S0167880923001639-main.pdf>

42. Multi-timescale changes of water temperature due to the Three Gorges Reservoir and climate change in the Yangtze River, China  
Ecological Indicators 15 March 2023 Volume 148 (Cover date: April 2023) Article 110129  
Zijun Xiao, Jian Sun, Bing Yuan  
<https://www.sciencedirect.com/science/article/pii/S1470160X23002716/pdfft?md5=a504c37a4d146876e9fd2ada897a5e59&pid=1-s2.0-S1470160X23002716-main.pdf>

43. Comparison of climate change impacts on the growth of C3 and C4 crops in China  
Ecological Informatics 23 December 2022 Volume 74 (Cover date: May 2023) Article 101968  
Yuying Wang, Suning Liu, Haiyun Shi  
<https://www.sciencedirect.com/science/article/pii/S1574954122004186/pdfft?md5=caee12de04c19fac11495b0fbad3eb81&pid=1-s2.0-S1574954122004186-main.pdf>

44. Climate change and ecological intensification of agriculture in sub-Saharan Africa – A systems approach to predict maize yield under push-pull technology  
Agriculture, Ecosystems & Environment 5 April 2023 Volume 352 (Cover date: 15 August 2023) Article 108511  
Nikolaos Alexandridis, Benjamin Feit, Mattias Jonsson  
<https://www.sciencedirect.com/science/article/pii/S0167880923001706/pdfft?md5=6c6604f0c87880ec1ab42184a5219b4c&pid=1-s2.0-S0167880923001706-main.pdf>

45. Climate change impacts on rice production in Japan: A Cobb-Douglas and panel data analysis  
Ecological Indicators 15 February 2023 Volume 147 (Cover date: March 2023) Article 110008  
Caixia Li  
<https://www.sciencedirect.com/science/article/pii/S1470160X23001504/pdfft?md5=abf0108ab2190ed4828a550326bec469&pid=1-s2.0-S1470160X23001504-main.pdf>

46. Modelling the impact of climate change and tillage practices on soil CO2 emissions from dry farmland in the Loess Plateau of China  
Ecological Modelling 4 February 2023 Volume 478 (Cover date: April 2023) Article 110276  
Yao Yao, Guang Li, Shuainan Liu  
<https://www.sciencedirect.com/science/article/pii/S0304380023000042/pdfft?md5=33bc956c6284f1cd3f6ee39de16aeda7&pid=1-s2.0-S0304380023000042-main.pdf>

47. Climate change impacts on regional agricultural irrigation water use in semi-arid environments  
Agricultural Water Management 27 February 2023 Volume 281 (Cover date: 1 May 2023) Article 108239  
Xin Tian, Jianzhi Dong, Xi Chen  
<https://www.sciencedirect.com/science/article/pii/S037837742300104X/pdfft?md5=6a68fbe1a75afa24c863d33375898261&pid=1-s2.0-S037837742300104X-main.pdf>

48. Assessment of agricultural adaptations to climate change from a water-energy-food nexus perspective  
Agricultural Water Management 2 May 2023 Volume 284 (Cover date: 30 June 2023) Article 108343  
Lina Wu, Amin Elshorbagy, Warren Helgason  
<https://www.sciencedirect.com/science/article/pii/S0378377423002081/pdfft?md5=657e37956f50fdbcc1a8d5655caa586f&pid=1-s2.0-S0378377423002081-main.pdf>

    Nguồn: Cục Thông tin khoa học và công nghệ quốc gia