

## Perception of Climate Change and the Adaptation Strategies and Capacities of the Rice Farmers in Kedah, Malaysia

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### Abstract

This article attempts to understand the perception of the rice-growing farmers on the issue of climate change (CC) and identify their adaptive capacity (AC). A survey was conducted through structured questionnaires to understand farmers' perception and adaptation strategies in response to changing climate and variability. The findings indicate that farmers are moderately adaptive to CC in the study area. The result also revealed that the main barriers are lack of funds and government support available information to CC. Farmers with higher AC can produce greater amount of rice. Rice producers should be enabled through improved extension services, government aid, such as grants, training for better level of adaptability, to help them achieve higher rice production.

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(from Web of Science Core Collection)

- Title: [not available] Times Cited: 69

Group Author(s): ADB

The economics of climate change in Southeast Asia: A regional review Published: 2009

Publisher: Asian Development Bank (ADB), Manila, Philippines
- Assessing the impacts of climate change in the Malaysian agriculture sector and its influences in investment decision Times Cited: 10

By: Al-Amin, A.Q.; Leal, W.F; de la Trinxeria, J.M.; et al.

Middle-East Journal of Scientific Research Volume: 7 Issue: 2 Pages: 225-234 Published: 2011

[\[Show additional data\]](#)

3. **Socioeconomic profile of farmer in Malaysia: Study on integrated agricultural development area in North-West Selangor** Times Cited: 8  
By: Alam, M. M.; Siwar, C.; Murad, M. W.; et al.  
Agricultural Economics and Rural Development New Series Volume: 7 Issue: 2 Pages: 249-265 Published: 2010  
Retrieved from  
FTP to: [ftp://www.ipe.ro/RePEc/iag/iag\\_pdf/AERD1013\\_249-265.pdf](ftp://www.ipe.ro/RePEc/iag/iag_pdf/AERD1013_249-265.pdf)  
[\[Show additional data\]](#)
4. **Agricultural vulnerability and adaptation to climatic changes in Malaysia: review on paddy sector.** Times Cited: 8  
By: Alam, M. M.; Chamhuri Siwar; Abdul Hamid Jaafar; et al.  
Current World Environment Volume: 8 Issue: 1 Pages: 1-12 Published: 2013
5. **Rural youth and agriculture problem' in Sudan: A case from the Nuba Mountains** Times Cited: 1  
By: Allajabou, H. A.; Bello, A. R. S.  
World Rural Observations Volume: 6 Issue: 4 Pages: 70-74 Published: 2014
6. Title: [not available] Times Cited: 2  
By: Antwi-Agyei, P.; Dougill, A. J.; Stringer, L. C.  
Barriers to climate change adaptation in sub-Saharan Africa: Evidence from northeast Ghana & systematic literature review Published: 2013  
Publisher: Centre for Climate Change Economics and Policy, Leeds
7. **Climate change and farmers adaptive capacity to strategic innovations: The case of northern Ghana. Special Issue: Development and Sustainability in Africa-Part 1** Times Cited: 3  
By: Asante, F. A.; Boakye, A.A.; Egyir, I. E.; et al.  
International Journal of Development and Sustainability Volume: 1 Issue: 3 Pages: 766-784 Published: 2012  
[\[Show additional data\]](#)
8. Title: [not available] Times Cited: 1  
By: Banjade, M. R.  
Local perception and use of information in community forest user groups of Nepal Published: 2003  
Unpublished MSc thesis  
Publisher: Wageningen University and Research Center, Wageningen, The Netherlands
9. **Corporate perceptions of climate change in Malaysia** Times Cited: 8  
By: Begum, Rawshan Ara; Pereira, Joy Jacqueline  
AFRICAN JOURNAL OF BUSINESS MANAGEMENT Volume: 5 Issue: 11 Pages: 4299-4305 Published: JUN 4 2011
10. **On the nature of barriers to climate change adaptation** Times Cited: 66  
By: Biesbroek, G. Robbert; Klostermann, Judith E. M.; Termeer, Catrien J. A. M.; et al.  
REGIONAL ENVIRONMENTAL CHANGE Volume: 13 Issue: 5 Pages: 1119-1129 Published: OCT 2013
11. **Adaptation to climate change in Ethiopia and South Africa: options and constraints** Times Cited: 371  
By: Bryan, Elizabeth; Deressa, Temesgen T.; Gbetibouo, Glwadys A.; et al.  
ENVIRONMENTAL SCIENCE & POLICY Volume: 12 Issue: 4 Pages: 413-426 Published: JUN 2009
12. **Micro-level analysis of farmers' adaptation to climate change in Southern Africa** Times Cited: 2  
By: Charles, N.; Rashid, H.  
IFPRI Discussion Paper No. 00714 Published: 2007  
Publisher: International Food Policy Research Institute, Washington, DC
13. Title: [not available] Times Cited: 2  
Group Author(s): CIA  
CIA world fact book Published: 2016
14. Title: [not available] Times Cited: 1  
Group Author(s): Department of Statistics Malaysia (DOSM)  
Compendium of environment statistics, Malaysia Published: 2016  
Publisher: DOSM, Putrajaya
15. **Limits to adaptation to climate change: a risk approach** Times Cited: 32  
By: Dow, Kirstin; Berkhout, Frans; Preston, Benjamin L.  
CURRENT OPINION IN ENVIRONMENTAL SUSTAINABILITY Volume: 5 Issue: 3-4 Pages: 384-391 Published: SEP 2013
16. **Examination of climate risk using a modified uncertainty matrix framework-Applications in the water sector** Times Cited: 16  
By: Ekstroem, Marie; Kuruppu, Natasha; Wilby, Robert L.; et al.  
GLOBAL ENVIRONMENTAL CHANGE-HUMAN AND POLICY DIMENSIONS Volume: 23 Issue: 1 Pages: 115-129 Published: FEB 2013

17. **Agricultural adaptation to climate change: insights from a farming community in Sri Lanka** Times Cited: 61  
 By: Esham, Mohamed; Garforth, Chris  
 MITIGATION AND ADAPTATION STRATEGIES FOR GLOBAL CHANGE Volume: 18 Issue: 5 Pages: 535-549 Published: JUN 2013
18. **Paddy Industry and Paddy Farmers Well-being A Success Recipe for Agriculture Industry in Malaysia** Times Cited: 21  
 By: Fahmi, Z; Samah, B. A.; Abdullah, H.  
 Asian Social Science Volume: 9 Issue: 3 Pages: 177 Published: 2013
19. **Summary for Policymakers** Times Cited: 6,058  
 By: Field, Christopher B.; Barros, Vicente R.; Mastrandrea, Michael D.; et al.  
 CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, PT A: GLOBAL AND SECTORAL ASPECTS: WORKING GROUP II CONTRIBUTION TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE Pages: 1-32 Published: 2014
20. **The impact of climate change towards Malaysian paddy farmers.** Times Cited: 2  
 By: Firdaus, R. B. R.; Latiff, I. A.; Borkotoky, P.  
 Journal of Development and Agricultural Economics Volume: 5 Issue: 2 Pages: 57-66 Published: 2013
21. **Perception of and adaption capacities to climate change adaption strategies by the rice farmers: a case of Rajshahi district in Bangladesh** Times Cited: 2  
 By: Ghosh, B. C.; Osmani, M. A. G.; Hossain, M. E.  
 J. Econ. Sustain. Dev. Volume: 6 Issue: 2 Pages: 136-145 Published: 2015
22. Title: [not available] Times Cited: 11,095  
 By: Hair, J. F.; Black, W. C.; Babin, B. J.; et al.  
 Multivariate data analysis Published: 2010  
 Publisher: Prentice Hall, Upper Saddle River, NJ  
[\[Show additional data\]](#)
23. **Farmers' adaptive capacity towards the impacts of global warming: a review** Times Cited: 6  
 By: Hamdan, ME; Man, N; Yassin, SM; et al.  
 Asian Soc Sci Volume: 9 Pages: 177-184 Published: 2013  
[\[Show additional data\]](#)
24. **Issues and procedures in adopting structural equation modeling technique** Times Cited: 220  
 By: Hoe, SL.  
 J Appl Quant Methods Volume: 3 Pages: 76-83 Published: 2008
25. **Limits and barriers to adaptation to climate variability and change in Bangladeshi coastal fishing communities** Times Cited: 41  
 By: Islam, Md Monirul; Sallu, Susannah; Hubacek, Klaus; et al.  
 MARINE POLICY Volume: 43 Pages: 208-216 Published: JAN 2014
26. Title: [not available] Times Cited: 2  
 By: Klein, R. J. T.  
 Climate change, adaptive capacity and sustainable development Published: 2002
27. Title: [not available] Times Cited: 1,912  
 By: Kline, RB.  
 Principles and practice of structural equation modeling Published: 2010  
 Publisher: Guilford Press, New York
28. **Assessing the value of climate forecast information for pastoralists: Evidence from southern Ethiopia and northern Kenya** Times Cited: 107  
 By: Luseno, WK; McPeak, JG; Barrett, CB; et al.  
 WORLD DEVELOPMENT Volume: 31 Issue: 9 Pages: 1477-1494 Published: SEP 2003
29. **Adaptive capacities of farmers to climate change adaptation strategies and their effects on rice production in the northern region of Ghana.** Times Cited: 5  
 By: Mabe, F. N.; Sarpong, D. B.; Osei-Asare, Y.  
 Russian Journal of Agricultural and Socio-Economic Sciences Volume: 11 Issue: 11 Pages: 9-17 Published: 2012
30. **The Perception of an Adaptation to Climate Change in Africa** Times Cited: 85  
 By: Maddison, D.  
 Policy Research Working Paper No. 4308 Published: 2007  
 Publisher: The World Bank, Washington, DC

Showing 30 of 48 [View All in Cited References page](#)