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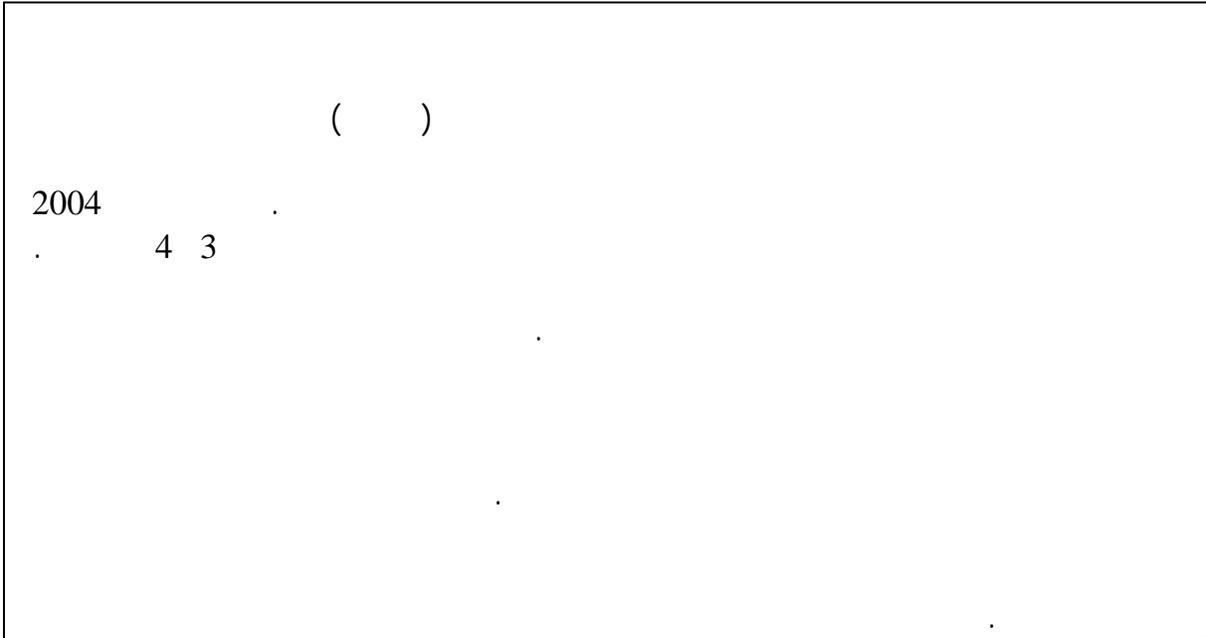


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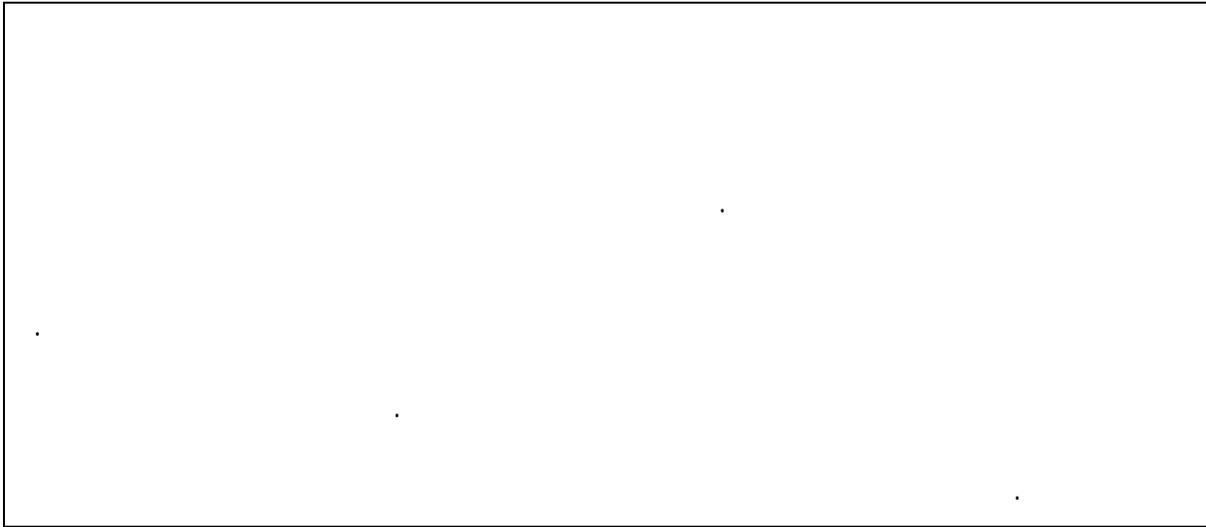
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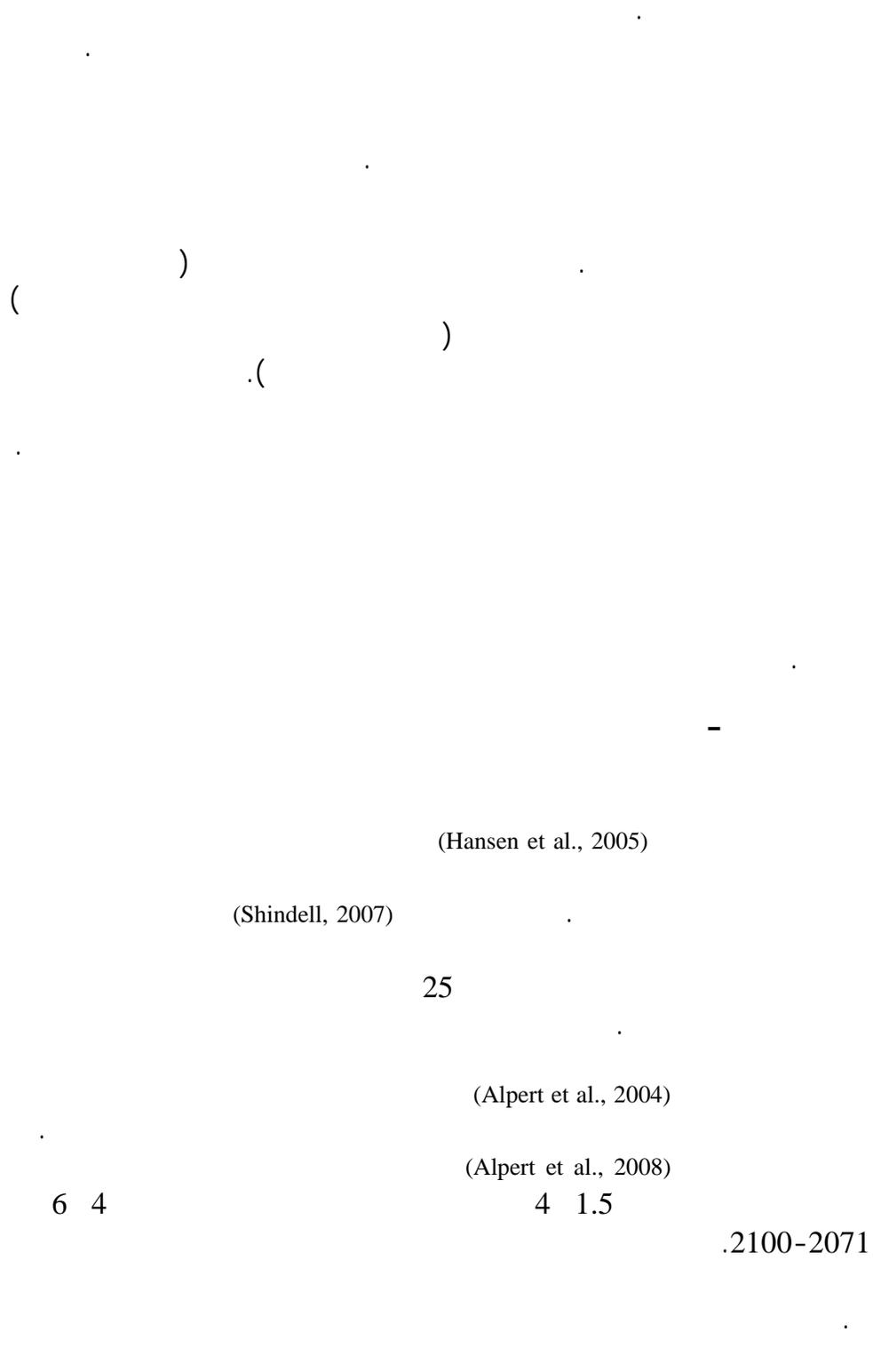
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(Ragab and Prudhomme, 2000)

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- Alcama, J., and Henrichs, T. 2002: Critical regions: A model-based estimation of world water resources sensitive to global changes, *Aquatic Sciences*, 64, 352-362.
- Alpert P., S.O. Krichak, H. Shafir, D. Haim and I. Osetinsky, 2008 (accepted). Climatic trends to extremes employing regional modeling and statistical interpretation over the E. Mediterranean. *Global and Planetary Change*.
- Alpert, P., Osetinsky, I., Zi v, B. and Shafir, H., 2004: Semi-objective classification for daily synoptic systems: Application to the Eastern Mediterranean climate change. *International Journal of Climatology*, 24 (8):1001-1011.
- Avissar R., and Pan H., 2000: "Simulations of the Summer Hydrometeorological Processes of Lake Tiberias" *Journal of Hydrometeorology* 1 (1): 95-109.
- Bou-Zeid, E., and El-Fadel, M. 2002. Climate change and water resources in Lebanon and the Middle East, *Journal of Water Resources Planning and Management*. Volume 128, Issue 5, pp. 343-355.
- FAO (2008), Climate Change: Implications for Agriculture in the Near East, NERC/08/INF/5, in the "Twenty-Ninth Regional Conference for the Near East" Cairo, Egypt 1-5 March 2008.
- Hansen, J., Sato, M., Ruedy, R., Nazarenko, L., Lacis, A., Schmidt, G.A., Russell, G., Aleinov, I., Bauer, M., Bauer, S., Bell, N., Cairns, B., Canuto, V., Chandler, M., Cheng, Y., Del Genio, A., Faluvegi, G., Fleming, E., Friend, A., Hall, T., Jackman, C., Kelley, M., Kiang, N., Koch, D., Lean, J., Lerner, J., Lo, K., Menon, S., Miller, R., Minnis, P., Novakov, T., Oinas, V., Perlwitz, J., Perlwitz, J., Rind, D., Romanou, A., Shindell, D., Stone, P., Sun, S., Tausnev, N., Thresher, D., Wielicki, B., Wong, T., Yao, M., and Zhang, S., 2005: Efficacy of climate forcings, *Journal of Geophysical Research-Atmospheres*, 110.
- IPCC (2007a). Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, United Kingdom, pp. 976.
- IPCC (2007b). Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (eds. B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer), Cambridge University Press, Cambridge, United Kingdom and New York, United States of America, pp. 851.
- IPCC (2007c). Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (eds. Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller). Cambridge University Press, Cambridge, United Kingdom and New York, United States of America, pp. 996.
- Kitoh A., A. Yatagai and P. Alpert, 2008. First super-high-resolution model projection that the ancient "Fertile Crescent" will disappear in this century. *Hydrological Research Letters*, 2, 1-4.
- Kunstmann, H., Suppan, P., Heckl, A. and A. Rimmer, 2007: Regional climate change in the Middle East and impact on hydrology in the Upper Jordan catchment. IAHS publication 313. Quantification and Reduction of Predictive Uncertainty for Sustainable Water Resources Management. pp. 141-149. Proceedings of Symposium H S2004 at IUGG2007, Perugia, July 2007.

Ministry of Water Resources and Irrigation, Egypt, Planning Sector, and Ministry of Foreign Affairs, the Netherlands, Directorate General for International Cooperation. "Impacts of Climate Change on Egypt's Water Resources System: a Review", NWRP Technical Report No. 21, Cairo, June, 2001.

Rahmstorf, S., Cazenave, A., Church, J.A., Hansen, J.E., Keeling, R.F., Parker, D.E. and Somerville R.C.J. (2007). Recent Climate Observations Compared to Projections. *Science*, 316, 709.

Ragab R., and C. Prudhomme. 2000. Climate change and water resources management in the Southern Mediterranean and Middle East countries. The second World Water Forum, 17-22, March 2000, The Hague, the Netherlands.

Shindell, D. 2007. Estimating the potential for twenty-first century sudden climate change, *Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences*, 365, 2675-2694.

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