

## BIOGRAPHICAL NOTES

Name: Xuemei Bai	Country: Australia
Candidate for which position? Councilor	ISIE member since: 2002
PLEASE GIVE YOUR REASONS FOR RUNNING FOR THIS POSITION (150 WORD LIMIT)	
<p>I have been associated with ISIE for more than 10 years, and have always felt home in this wonderful organization. I am honored to be nominated for Councilor position, and if successful, would like to contribute to broadening ISIE linkages with other international scientific bodies, in particular with those that I am associated with.</p>	
DESCRIBE YOUR CURRENT PROFESSIONAL AND/OR ACADEMIC ACTIVITIES (100 WORD LIMIT)	
<p>I am a professor in urban environment and human ecology at Fenner School of Environment and Society, Australian National University. My current research focuses on several frontiers of urban sustainability science, including understanding the structure, function and processes of urban social ecological systems, the environmental and ecosystem consequences and drivers of urbanization, urban metabolism, urban energy system and the role of renewable energy, climate mitigation and adaptation of cities, innovative practices in urban environmental management, and the urban sustainability transition in Asia.</p>	
LIST PREVIOUS PROFESSIONAL AND/OR ACADEMIC POSITIONS (100 WORD LIMIT)	
<ul style="list-style-type: none"><li>• Senior Science Leader, Senior Principal Research Scientist, CSIRO Ecosystem Sciences (Nov. 2006 –May 2011)</li><li>• Adjunct Professor, Beijing Normal University (2014- current)</li><li>• Adjunct Professor, Institute of Urban Environment, Chinese Academy of Sciences. (2010- current)</li><li>• Visiting Associate Professor in the Practice of Urban Ecology (April, 2001 - June 2003) School of Forestry and Environmental Studies, Yale University.</li><li>• Research Fellow and Senior Research Fellow (April 1998 – August 2006) Institute for Global Environmental Strategies (IGES)</li><li>• Researcher in Urban Ecology (October 1993 – March 1998) Japanese Center for International Studies in Ecology (JISE)</li></ul>	
EDUCATION	
<ul style="list-style-type: none"><li>• PhD, The University of Tokyo</li><li>• Master of Engineering, The University of Tokyo</li><li>• Bachelor of Science, Peking University</li></ul>	
AWARDS/MERITS	
<p>Featured as one of 21 outstanding women from China and Australia at the Australian Pavilion, World Expo Shanghai 2010.</p> <p>Zayed Prize for Scientific and Technological Achievement in Environment, as one of the 1360 scientists contributed to Millennium Ecosystem Assessment.</p>	
PUBLICATIONS	
<b><u>SELECTED JOURNAL PAPERS</u></b>	
<ul style="list-style-type: none"><li>• BAI, X., P. SHI, Y. LIU. 2014. REALIZING CHINA'S URBAN DREAM. <i>NATURE</i>, 509: 158-160.</li><li>• TRENCHER, G., X. BAI, J. EVANS, K MCCORMICK, M. YARIME. 2014. UNIVERSITY PARTNERSHIPS FOR CO-DESIGNING AND CO-PRODUCING URBAN SUSTAINABILITY. <i>GLOBAL ENVIRONMENTAL CHANGE</i> 28:153-165.</li><li>• DENG, X. AND X. BAI. 2014. SUSTAINABLE URBANIZATION IN WESTERN CHINA. <i>ENVIRONMENT: SCIENCE AND POLICY FOR SUSTAINABLE DEVELOPMENT</i>, 56 (3), PAGES 12–24.</li><li>• DENG, X., H ZHONG, X BAI, T ZHAO, M WANG 2013. OPPORTUNITIES AND CHALLENGES FOR DEVELOPMENT OF URBANIZATION IN WESTERN CHINA. <i>CHINESE JOURNAL OF POPULATION RESOURCES AND ENVIRONMENT</i>, 1-8. DOI: 10.1080/10042857.2013.835545.</li></ul>	

- LIN, T., Y. YU, X.M. BAI, L. FENG, J. WANG. 2013. CARBON EMISSION ACCOUNTING OF URBAN RESIDENTIAL CONSUMPTION: A HOUSEHOLD SURVEY BASED APPROACH. *PLOS ONE* 8(2): e55642. 10.1371/JOURNAL.PONE.0055642.
- BAYNES, T. AND X.M. BAI. 2012. RECONSTRUCTING THE ENERGY HISTORY OF A CITY: MELBOURNE'S POPULATION, URBAN DEVELOPMENT, ENERGY SUPPLY AND USE FROM 1961-2005. *JOURNAL OF INDUSTRIAL ECOLOGY*, 16(6):862-874.
- BAI, X.M., I. NATH, T. CAPON, N. HASAN, D. JARON. 2012. HEALTH AND WELLBEING IN THE CHANGING URBAN ENVIRONMENT: COMPLEX CHALLENGES, SCIENTIFIC RESPONSES, AND THE WAY FORWARD. *CURRENT OPINION ON ENVIRONMENTAL SUSTAINABILITY* 4: 465-472.
- HUANG, Y., F. LI, X.M. BAI, S.CUI. 2012. COMPARING VULNERABILITY OF COASTAL COMMUNITIES TO LANDUSE CHANGE: ANALYTICAL FRAMEWORK AND A CASE STUDY IN CHINA. *ENVIRONMENTAL SCIENCE & POLICY* 23, 133-143.
- HASHIMOTO S., M. FISHER-KOWALSKI, S. SUH, X.M. BAI, 2012. GREENING GROWING GIANTS: A MAJOR CHALLENGE OF OUR PLANET. *JOURNAL OF INDUSTRIAL ECOLOGY*. 16(4): 459-466. DOI: 10.1111/j.1530-9290.2012.00522.x.
- ROGERS, D., A. DURAIAPPAH, D.C. ANTONS, P. MUNOZ, X.M. BAI, M. FRAGKIAS, H. GUTSCHER. A VISION FOR HUMAN WELLBEING: TRANSITION TO SOCIAL SUSTAINABILITY. 2012. *CURRENT OPINION ON ENVIRONMENTAL SUSTAINABILITY* 4:1-13. (FIRST PUBLISHED ONLINE FEB 17, 2012. DOI LINK: [HTTP://DX.DOI.ORG/10.1016/J.COSUST.2012.01.013](http://dx.doi.org/10.1016/j.cosust.2012.01.013))
- BAI, X.M., J. CHEN, P.J. SHI. 2012. LANDSCAPE URBANIZATION AND ECONOMIC GROWTH: POSITIVE FEEDBACKS AND SUSTAINABILITY DILEMMAS. *ENVIRONMENTAL SCIENCE & TECHNOLOGY* 46(1): 132-139.
- LI, G.L., X.M. BAI, S. YU, H. ZHANG, Y.G. ZHU. 2011. URBAN PHOSPHORUS METABOLISM THROUGH FOOD CONSUMPTION: THE CASE OF CHINA. *JOURNAL OF INDUSTRIAL ECOLOGY*. 16(4): 588-599. DOI: 10.1111/j.1530-9290.2011.00402.x.
- BAYNES, T., M. LENZEN, J. STEINBERGER, X.M. BAI. 2011. COMPARISON OF HOUSEHOLD CONSUMPTION AND REGIONAL PRODUCTION APPROACHES TO ASSESSING URBAN ENERGY USE AND IMPLICATIONS FOR POLICY. *ENERGY POLICY* 39(11): 7298-7309. DOI: 10.1016/j.enpol.2011.08.053.
- BAI, X.M., R. R. J. MCALLISTER, M. BEATY, B. TAYLOR. 2010. URBAN POLICY AND GOVERNANCE IN A GLOBAL ENVIRONMENT. *CURRENT OPINION ON ENVIRONMENTAL SUSTAINABILITY*. DOI: 10.1016/j.cosust.2010.05.008
- LIN, JY, B. CAO, SH CUI, W. WANG, X.M. BAI. 2010. EVALUATING THE EFFECTIVENESS OF URBAN ENERGY CONSERVATION AND GHG MITIGATION MEASURES: THE CASE OF XIAMEN CITY, CHINA. *ENERGY POLICY* 38:5123-5132.
- BAI, XM, BH. ROBERTS, J. CHEN. 2010. URBAN SUSTAINABILITY EXPERIMENT IN ASIA: PATTERNS AND PATHWAYS. *ENVIRONMENTAL SCIENCE AND POLICY* 13: 312-325. doi:10.1016/j.envsci.2010.03.011.
- BERKHOUT, F. G. VERBONG, A.J. WIECZOREK, R. RAVEN, L. LEVEL, X.M. BAI, 2010. SUSTAINABILITY EXPERIMENTS IN ASIA: NICHE INFLUENCING ALTERNATIVE DEVELOPMENT PATHWAYS? *ENVIRONMENTAL SCIENCE AND POLICY*. doi:10.1016/j.envsci.2010.03.010.
- BAI X, WIECZOREK A, KANEKO S, LISSON S, CONTRERAS A 2009. ENABLING SUSTAINABILITY TRANSITION IN ASIA: THE IMPORTANCE OF VERTICAL AND HORIZONTAL LINKAGES. *TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE* 76: 255-266.
- GRIMM NB, FAETH SH, GOLUBIEWSKI NE, REDMAN CL, WU JG, BAI XM & BRIGGS JM, 2008. GLOBAL CHANGE AND THE ECOLOGY OF CITIES. *SCIENCE* 319: 756-760.
- XIAO, Y., X. BAI, ZH. OUYANG, H. ZHENG, 2007. THE COMPOSITION, TRENDS, AND ENVIRONMENTAL IMPACTS OF MUNICIPAL SOLID WASTE IN BEIJING. SPECIAL ISSUE ON MONITORING QUALITY AND CHARACTERISTICS OF MUNICIPAL SOLID WASTE IN DEVELOPING COUNTRIES, *ENVIRONMENTAL MONITORING AND ASSESSMENT* 135:21-30.
- BAI, X. 2007 INTEGRATING GLOBAL CONCERNS INTO URBAN MANAGEMENT: THE SCALE ARGUMENT AND READINESS ARGUMENTS. *JOURNAL OF INDUSTRIAL ECOLOGY* 11(2): 15-29.
- BAI, X. 2007 INDUSTRIAL ECOLOGY AND GLOBAL IMPACTS OF CITIES. *JOURNAL OF INDUSTRIAL ECOLOGY* 11(2): 1-6.
- BAI, X. AND P. SHI, 2006. POLLUTION CONTROL IN CHINA'S HUAI BASIN: WHAT LESSONS FOR SUSTAINABILITY? *ENVIRONMENT* 48(7):22-38.
- BAI, X. 2003. THE PROCESS AND MECHANISM OF URBAN ENVIRONMENTAL CHANGE: AN EVOLUTIONARY VIEW. *INTERNATIONAL JOURNAL OF ENVIRONMENT AND POLLUTION*, 19(5):528-541.
- BAI, X. 2003. CITIES AND SUSTAINABILITY. *JOURNAL OF INDUSTRIAL ECOLOGY*: 7(1):143-144.
- BAI, X. 2002. INDUSTRIAL RELOCATION IN ASIA: A SOUND ENVIRONMENTAL MANAGEMENT STRATEGY? *ENVIRONMENT* 44(5): 8-21.

- BAI, X., AND H. IMURA 2001. TOWARDS SUSTAINABLE URBAN WATER RESOURCE MANAGEMENT: A CASE STUDY IN TIANJIN, CHINA. *SUSTAINABLE DEVELOPMENT*, 9:24-35.
- BAI, X., AND H. IMURA 2001. WATER RESOURCE MANAGEMENT IN CHINESE CITIES: LESSONS AND CHALLENGES FROM THE CASE OF TIANJIN. *JOURNAL OF INTERNATIONAL DEVELOPMENT STUDIES*, 9(2): 95-112. (IN JAPANESE)
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#### **BOOKS:**

- X. BAI, T. GRAEDEL, AND A. MORISHIMA EDS. URBANIZATION AND ENVIRONMENTAL CHANGE: CITIES AS HEROES. FORTHCOMING FROM CAMBRIDGE UNIVERSITY PRES, (*FORTHCOMING IN 2015*)
- LARRY PAPAY, XUEMEI BAI AND 29 OTHER COMMITTEE MEMBERS, 2010, THE POWER OF RENEWABLES: OPPORTUNITIES AND CHALLENGES FOR CHINA AND THE UNITED STATES. US NATIONAL ACADEMIES PRESS. WASHINGTON DC.

#### **SELECTED BOOK CHAPTERS:**

- GREGORY TRENCHER AND XUEMEI BAI, X. 2015. URBAN SUSTAINABILITY EXPERIMENTS AND TRANSITION IN ASIA. INVITED BOOK CHAPTER FOR HANDBOOK ON SUSTAINABILITY TRANSITION AND SUSTAINABLE PEACE. HANDBOOK ON SUSTAINABILITY TRANSITION AND SUSTAINABLE PEACE, HANS GÜNTER BRAUCH, ÚRSULA OSWALD SPRING, JOHN GRIN, JÜRGEN SCHEFFRAN (EDS.), HEXAGON. (IN PRESS)
- ZHANG, X., X. BAI AND S. CUI. SPATIAL EVOLUTION OF XIAMEN'S URBANIZATION AND ITS IMPACT ON RURAL COMMUNITY. BOOK CHAPTER, FOR CITIES IN EVOLUTION. (FORTHCOMING)
- BAI, XM. TEMPORAL AND SPATIAL DYNAMICS OF URBAN ENVIRONMENTAL CHANGE IN ASIA: AN EVOLUTIONARY VIEW. IN: CITIES IN EVOLUTION: URBANIZATION, ENVIRONMENTAL CHANGE, AND SUSTAINABILITY. (X. BAI, T. GRAEDEL AND A. MORISHIMA EDS). (FORTHCOMING)
- BAI X, URBANIZATION AND FOOD SECURITY. IN: CITIES IN EVOLUTION: URBANIZATION, ENVIRONMENTAL CHANGE, AND SUSTAINABILITY. (X. BAI, T. GRAEDEL AND A. MORISHIMA EDS). (FORTHCOMING)
- BAI, XM. CITIES OVERVIEW. 2012. BIRKSHIRE ENCYCLOPEDIA ON SUSTAINABLE DEVELOPMENT. PP: 55-60.
- GRUBLER, A., X. BAI, T. BUETTNER, S. DHAKAL, D.J. FISK, T. ICHINOSE, J. KEIRSTEAD, G. SAMMER, D. SATTERTHWAITE, N.B. SCHULZ, N. SHAH, J. STEINBERGER AND H. WEISZ. 2012: URBAN ENERGY SYSTEMS. IN: THE GLOBAL ENERGY ASSESSMENT. IIASA, LAXENBURG, AUSTRIA AND CAMBRIDGE UNIVERSITY PRESS, CAMBRIDGE, UNITED KINGDOM AND NEW YORK, NY, USA.
- BAI, X., S. DHAKAL, J. STEINBERGER, H. WEISZ. 2012. DRIVERS OF URBAN ENERGY USE AND MAIN POLICY LEVERAGES. IN: ENERGIZING SUSTAINABLE CITIES: ASSESSING URBAN ENERGY (A. GRUBLER AND D. FISK EDS). EARTHSCAN.
- BAI, X.M. AND H. SCHANDL. URBAN ECOLOGY AND INDUSTRIAL ECOLOGY. 2011. IN: THE ROUTLEDGE HANDBOOK OF URBAN ECOLOGY (I. DOUGLAS, D. GOODE, M. HOUCK AND R. WANG EDS.), ROUTLEDGE. PP:26-37.
- BAI XM AND B. WALKER. URBAN RESILIENCE. IN: CITIES IN EVOLUTION: URBANIZATION, ENVIRONMENTAL CHANGE, AND SUSTAINABILITY. (X. BAI, T. GRAEDEL AND A. MORISHIMA EDS). FORTHCOMING.
- ROBERTS, B., XM BAI. 2011. ENVIRONMENT AND CLIMATE CHANGE. IN: STATE OF ASIAN CITIES, 2010/2011. UN HABITAT. (REPUBLICED BY UNHABITAT IN 2011)
- ROBERTS, B., XM BAI. 2010. ENVIRONMENT AND CLIMATE CHANGE. IN: STATE OF ASIAN CITIES, 2009/2010. UN HABITAT.
- BAI XM. 2008. URBAN TRANSITION IN CHINA: TRENDS, CONSEQUENCES AND POLICY IMPLICATIONS. IN: THE NEW GLOBAL FRONTIER: URBANIZATION, POVERTY AND ENVIRONMENT IN THE 21ST CENTURY, G. MARTIN, G. MCGRANAHAN, M. MONTGOMERY AND R. FERNÁNDEZ-CASTILLA (EDS). EARTHSCAN, LONDON. PP:339-356.
- NEWTON, P. AND BAI, XM, 2008. TRANSITIONING TO SUSTAINABLE URBAN DEVELOPMENT. IN: TRANSITIONS: PATHWAYS TOWARDS SUSTAINABLE URBAN DEVELOPMENT IN AUSTRALIA. P. NEWTON ED. CSIRO PUBLISHING AND SPRINGER. PP: 3-19.
- BAI, XM. 2007. RIZHAO: SOLAR-POWERED CITY. IN: STATE OF THE WORLD 2007: OUR URBAN FUTURE, WORLD WATCH INSTITUTE.
- MCGRANAHAN, G., P. MARCOTULLIO, XM. BAI, D. BALK, T. BRAGA, I. DOUGLAS, T. ELMQVIST, W. REES, D. SATTERTHWAITE, J. SONGSORE, H. ZLOTNICK, J. EADES, E.L EZCURRA, A. WHYTE. 2005. URBAN SYSTEMS. IN: HASSAN R, SCHOLES R, AND ASH N (EDS). ECOSYSTEMS AND HUMAN WELL-BEING: CURRENT STATE AND

TRENDS (MILLENNIUM ECOSYSTEM ASSESSMENT SERIES). WASHINGTON, DC: ISLAND PRESS.

PROFESSIONAL ASSOCIATIONS (I.E. BOARD MEMBERSHIPS, PROFESSIONAL SOCIETIES, ETC)

- Member, Science Committee, Future Earth (2013- )
- Vice Chair and Member of Science Committee, IHDP (International Human Dimensional Program on Global Change) (January 2011- June 2014);
- Member, European Research Council Grant Assessment Panel (2014-)
- Elected Board Member, Sustainable Urban Systems Chapter of International Society of Industrial Ecology
- Editorial Board Member for international journals: Sustainability Science; International Journal of Sustainable Cities and Society; Computer, Environment and Urban Systems; Environment; The Open Environmental Journal.