

Curriculum Vitae

Name: Dr. Sanzidur Rahman
Position: Principal Lecturer in Rural Development
Date appointed: August 01, 2006
Organization: University of Plymouth, UK
Address: Room 103,7 Kirkby Place
School of Geography
Faculty of Social Science and Business
University of Plymouth
Plymouth, PL4 8AA
United Kingdom
Phone: +44-1752-238411
Fax: +44-1752-233054
E-mail: srahman@plymouth.ac.uk
Web page: <http://www.plymouth.ac.uk/pages/dynamic.asp?page=staffdetails&id=srahman>
Date of Birth: September 02, 1962
Nationality: Bangladeshi
Residency: United Kingdom
Marital Status: Married with one daughter



OVERVIEW

Specialized in production economics, specifically, on efficiency and productivity measurement, and underlying determinants of technological change, innovation, and diffusion in agriculture. I also have professional experience in impact assessment, planning and evaluation of development projects acquired through comprehensive research for over 20 years in the relevant field. Accomplishment includes several publications in refereed journals, edited volumes, magazines, proceedings, and reports. I have held research positions at the University of Manchester, UK; International Food Policy Research Institute, USA; University of Reading, UK; Asian Institute of Technology, Thailand; Chiang Mai University, Thailand; and BRAC, Bangladesh. Currently, employed as Principal Lecturer at the University of Plymouth, UK.

EDUCATION

- 1998 **Ph.D.** in Regional-Rural Development Planning. **Asian Institute of Technology**, Bangkok, Thailand. Dissertation: *Socio-economic and Environmental Impacts of Technological Change in Bangladesh Agriculture*.
- 1993 **M.S.** in Agricultural Systems. **Chiang Mai University**, Chiang Mai, Thailand. Thesis: *Joint Determination of Demand for Inputs and Choice of Rice Varieties: A Meta-Production Function Approach*.
- 1987 **B.Sc. (Honours)** in Agricultural Economics. **Bangladesh Agricultural University**, Mymensingh, Bangladesh.

EMPLOYMENT HISTORY

- 2006 *PRINCIPAL LECTURER* (ongoing)
2003 *SENIOR LECTURER* (3 years and 2 months)
School of Geography, Faculty of Social Science and Business,
University of Plymouth, Drake Circus, Plymouth, UK

- Teaching interests: economics of agricultural and rural development, quantitative research methods, and statistics.
 - Research interests: efficiency and productivity measurement in agriculture; underlying areas of technological change, its generation and diffusion; modelling farmers' decision making, poverty, food and nutrition insecurity, sustainable rural livelihoods.
- 2002 *HALLSWORTH RESEARCH FELLOW* (1 year and 6 months)
School of Economic Studies
University of Manchester, Manchester, UK.
- Teaching: two post-graduate courses of the School of Economic Studies
 - Research: issues of efficiency and productivity measurement and the underlying areas of technological change, its generation and diffusion; influences of behavioural responses on economic decision making in agriculture.
- 2000 *POST-DOCTORAL FELLOW* (1 year and 8 months)
Food Consumption and Nutrition Division
International Food Policy Research Institute (IFPRI), Washington, D.C., USA.
Field post: USAID-funded SHAHAR Project of CARE, Dhaka, Bangladesh.
- Co-managed a project to study urban livelihoods and food security and to document best practices in alleviating urban poverty, food and nutrition insecurity.
 - Provided research support and technical assistance to program activities of CARE (an international NGO) aimed at reducing urban poverty, food and nutrition insecurity in Bangladesh.
 - Managed large-scale household surveys in intervention areas.
 - Conducted lesson learned reviews and workshops for modification and effective implementation of program interventions.
 - Managed project office in collaboration with CARE-Bangladesh in Dhaka.
- 1999 *VISITING RESEARCH FELLOW* (12 months)
Department of Agricultural and Food Economics
University of Reading, Reading, UK.
- Studied issues of efficiency and productivity measurement and the underlying areas of technological change, its generation and diffusion. Specifically, measured Total Factor Productivity in crop sector, analyzed profitability, supply and adoption of modern agricultural technology, and estimated technical, allocative, cost, and scale efficiency in modern and traditional rice cultivation in Bangladesh.
 - Studied factors determining women's employment in agricultural sector, impact of technological change in agriculture on income distribution and poverty, and regional variation in agricultural development in Bangladesh.
 - Reviewed jointly methodologies for estimating returns to R&D investment in pine forestry projects.
- 1998 *RESEARCH FELLOW* (4 months)
School of Environment, Resources and Development (SERD)
Asian Institute of Technology (AIT), Bangkok, Thailand.
- Studied impact of technological change in agriculture on environment, prospect of food production sustainability and women's employment in Bangladesh.
 - Examined the yield trend of reservoir fisheries and the planning performance of the fisheries sector in Bangladesh.
 - Studied role of women in ox-bow lakes and reservoir fisheries in Bangladesh.

- Facilitated an international training workshop on Rural Road Development and Management.
- 1996 *RESOURCE PERSON* (2 years and 4 months)
Centre for Language and Educational Technology (CLET)
Asian Institute of Technology (AIT), Bangkok, Thailand.
- Teaching: Economics and Statistics for Pre-Master's Bridging students, CLET, AIT.
 - Teaching support: Managerial Economics and Business Statistics for first term MBA students of School of Management, and Statistics and Probability for first term Master's students of School of Environment, Resources and Development, AIT.
- 1993 *RESEARCH ASSOCIATE* (4 months)
Multiple Cropping Centre (MCC), Faculty of Agriculture
Chiang Mai University, Chiang Mai, Thailand.
- Estimated input demand in traditional high quality aromatic rice and modern rice production and provided policy directions on agricultural development for northern Thailand
 - Estimated profit efficiency of high quality rice and modern rice farmers of northern Thailand
 - Co-edited and produced completed Research Studies and Master's Theses into MCC Agricultural Economics Report Series for wider dissemination
- 1994 *SENIOR STAFF ECONOMIST* (6 years and 5 months)
1988 *STAFF ECONOMIST* (5 yrs and 4 months)
Research and Evaluation Division (RED)
BRAC (Bangladesh Rural Advancement Committee), Dhaka, Bangladesh.
- Conducted policy studies on multifaceted impacts of modern and hybrid agricultural technology dissemination, government and NGO collaboration in technology development and diffusion, wildlife conservation, agroforestry and social forestry development programs in Bangladesh.
 - Estimated energy demand (commercial and non-commercial energy) forecasts for Bangladesh for the period 1993 – 2020.
 - Conducted several field level studies on BRAC agricultural and rural development interventions and authored professional reports.
 - Co-managed a longitudinal large-scale household survey in Bangladesh.
 - Supervised field researchers stationed at BRAC research project sites.
 - Served as *resource person* for training and developing capacities of junior researchers and program management personnels.
- 1989 *SCIENTIFIC OFFICER* (3 months)
On-Farm Research Division (OFRD)
Bangladesh Agricultural Research Institute (BARI), Gazipur, Bangladesh.
Field post: Regional Agricultural Research Station (RARS), Chittagong, Bangladesh.
- Conducted field level studies on farming systems practiced in the BARI operated areas.
 - Authored professional reports on patterns of livestock resource use in BARI operated areas.
- 1987 *RESEARCH ASSOCIATE* (9 months)
Bangladesh Institute of Development Studies (BIDS), Dhaka, Bangladesh.

- Prepared abstracts, reviewed journal articles and supervised data collection, coding and editing.
- Participated in a large-scale nationally representative farmer survey evaluating differential impact of modern rice cultivation in Bangladesh.

HONOURS

- 2004 **Certificate of Teaching and Learning Course** (accredited by the United Kingdom Institute for Learning and Teaching in Higher Education [ILT]) from University of Manchester, UK. Awarded on February 2004.
- 1994 **Certificate of Distinction** from Chiang Mai University, Thailand in recognition of outstanding study performance in M.S. in Agricultural Systems. Awarded on January 1994.
- 1987 **University Prize** from Bangladesh Agricultural University, Bangladesh for securing First Position with a First Class in B.Sc. (Honours) in Agricultural Economics. Awarded on January 1995.

SKILLS

Languages: English – excellent; Bengali (native) – excellent; Hindi – excellent; French – basic.

Econometric/Statistical Software: LIMDEP, STATA, Frontier 4.1, DEAP 2.1, SPSS PC+, Minitab.

TRAINING

- 1999 *Environmental and Social Impact Assessment for Strategic Planning and Project Implementation* organized by IAIA (International Association for Impact Assessment), University of Strathclyde, Glasgow, Scotland, UK during June 13 – 14, 1999. (Participant)
- 1998 *Participatory Framework for Planning Rural Road Networks, Construction and Maintenance: Present Practice and Implications for Developing Countries of Asia* jointly organized by SERD/AIT– ILO, Bangkok, Thailand during November 30 – December 2, 1998. **(Facilitator)**
- 1998 *Urban Poor, Environment, Infrastructure and Services* jointly organized by UEM/AIT – UNICEF/Bangladesh, Bangkok, Thailand during February 23 – March 6, 1998. **(Facilitator)**
- 1997 *Urban Poor, Environment, Infrastructure and Services* jointly organized by UEM/AIT – Canadian Universities Consortium, Bangkok, Thailand during November 24 – Dec 5, 1997. **(Facilitator)**
- 1995 *Environmental Impact Assessment (EIA) Skill Training* organized jointly by Irrigation Support Program for Asia and the Near East (ISPAN)/ Flood Plan Coordination Organization (FPCO)/ Department of Environment, Dhaka, Bangladesh during January 5-31, 1995. (Participant)
- 1994 *Internship in Environmental Education* at Centre for Environment Education, Ahmedabad, India during June 20 – August 13, 1994. (Participant)
- 1994 *Sustainable Development and Environmental Assessment* organized jointly by Humber College, Toronto, Canada/ Micro Industries Development Assistance and Service (MIDAS), Dhaka, Bangladesh during April 10 – 13, 1994. (Participant)

- 1990 *Agroforestry Research and Development* organized jointly by International Council for Research on Agroforestry (ICRAF), Nairobi, Kenya/ Bangladesh Agricultural Research Council (BARC), Dhaka, Bangladesh during October 12 – 31, 1990. (Participant)

RESEARCH GRANTS AND CONTRACTS

- Total allocations: **£384,828** (Research Grants = £214,936; Fellowships = £111,225; Travel/Conference Grants = £14,732; and Scholarships = £43,935)
- 2006 – 2008 £112,748 KTP (with Martin Warren) 2-year project jointly funded by DTI and Milk Link Ltd. Develop innovative forecasting techniques to predict milk supply and promote planning and support to farmers.
- £1,000 DEFRA to present paper at 26th Tri-annual IAAE Conference to be held in Gold Coast, Australia during August 2006.
- 2005 – 2008 Academic research collaboration for a 3-year period (01 April 2005 – 31 March 2008) with Faculty of Economics, Chiang Mai University, Chiang Mai, Thailand.
- Baht 80,000 (£1,160) Chiang Mai University to visit Faculty of Economics, Chiang Mai University, Thailand to initiate academic collaboration process during May 2005.
- Baht 2,000,000 (£28,500) Thailand Research Foundation granted to Chiang Mai University, Thailand (with Dr. Songsak Sriboonchitta, Dean, Faculty of Economics and Dr. Aree Wiboonspongse, Associate Professor and Head, Agribusiness and Marketing Centre, Chiang Mai University, Thailand).
- 2003 £73,688 DEFRA (with Professor Andrew Errington and Dr. Sheila Agarwal of UoP, Dr Paul Courtney and Professor Malcolm Moseley of University of Gloucester). Determinants of Relative Economic Performance of Rural Areas in UK.
- £4,720 IAAE for providing administrative support as well as present paper at 25th Tri-annual IAAE Conference held in Durban, Republic of South Africa during August 2003.
- 2002 – 2005 £85,000 (approximate total allocation) Hallsworth Research Fellowship at the University of Manchester, UK for a 3-year period to work on productivity and efficiency issues in developing country agriculture.
- 2000 \$1,200 (£857) IAAE (International Association of Agricultural Economics) to present paper at 24th Tri-annual IAAE Conference held in Berlin, Germany during August 2000.
- 1999 \$30,000 (£21,425) USDA to work on productivity and efficiency issues in developing country agriculture at University of Reading, UK for 1 year.
- \$2000 (£1,430) IAIA (International Association for Impact Assessment) grant to present paper and participate in a training workshop at the University of Strathclyde, Glasgow, UK.
- 1998 Baht 250,000 (£4,800) REDP-B Fellowship of the Government of Japan to work on regional planning issues in developing countries at Asian Institute of Technology in Bangkok, Thailand for 4 months.

£2,500 DFID to present paper at the International Conference on Sustainable Development in a Developing World at the University of Manchester, UK.

\$2,500 (£1,785) USDA to present paper at the International Conference on Women in Agriculture at Washington, D.C., USA.

SFr 3,200 (£1,280) ETH,Z (Swiss Federal Institute of Technology, Zurich) Academic Visitor Fellowship to visit the Institute of Agricultural Economics, ETH,Z, Switzerland.

1995 – 1998 \$43,500 (£31,070) Government of Japan scholarship to pursue Doctoral studies at the Asian Institute of Technology, Bangkok, Thailand for 3 years.

1991 – 1993 \$18,000 (£12,865) Ford Foundation, USA scholarship to pursue Master's program at Chiang Mai University, Chiang Mai, Thailand.

POSTGRADUATE RESEARCH SUPERVISION AND EXAMINATION

Ph.D. Supervision

2006 – 2009 “The impact of the Structural Adjustment Program (SAP) and the efficiency of Nigerian agricultural policy” by Brodrick O. Awerije. School of Geography, University of Plymouth, UK.

2003 – 2007 “Improving Productivity in the Cocoa Agroindustry of Tabasco, Mexico: A Fitness Approach” by Cesar J. Vasquez-Navarette. School of Geography, University of Plymouth. UK.

Ph.D. Examiner (Internal)

2005 “International Freight Transport Multimodal Development in Developing Countries: The Case of Bangladesh” by Dewan Mohammed Zahurul Islam. Department of Shipping and Logistics, University of Plymouth, UK. March 21, 2005.

M.Sc./M.Res. Supervision

2004 “A review of agricultural policy in Nigeria (1970 – 2000)” by Brodrick O. Awerije. School of Biological Sciences, University of Plymouth.

PROFESSIONAL MEMBERSHIP

Member, International Association of Agricultural Economists (IAAE), USA.

Member, Agricultural Economics Society (AES), UK.

Life-member, Asian Institute of Technology Alumni Association (AITAA), Thailand.

JOURNAL REFEREE

Agricultural Economics

Journal of Agricultural Economics

European Review of Agricultural Economics

Journal of Applied Economics

Food Policy

Journal of Developing Areas

Canadian Journal of Agricultural Economics

PUBLICATIONS

Articles published in refereed journals, book chapters, proceedings, and professional magazines

- 2007 Asadullah, M.N. and **Rahman, S.** 2007. "Farm productivity and efficiency in rural Bangladesh: the role of education revisited". *Applied Economics* (forthcoming). [ISSN: 0003-6846]
- Rahman, S.** and Parkinson, R.J. 2007. "Soil fertility and productivity relationships in rice production system, Bangladesh. *Agricultural Systems* (in press) [ISSN: 0308-521X].
- 2006 Ahmed, K.K., **Rahman, S.** and Ahammed, S.U. 2006. "Managing fisheries resources in Kaptai Reservoir, Bangladesh". *Outlook on Agriculture* (in press) [ISSN: 0030-7270]
- Rahman, S.** and Hasan, M.K. 2006. "Efficiency effects of environmental and managerial factors: the case of wheat producers in Bangladesh". In Warren, M. and Yarwood, R. (eds.) *Proceedings of the Rural Futures Conference on The Rural Citizen: Governance, culture and wellbeing in the 21st century*. April 5 – 7, 2006, University of Plymouth, UK. [ISBN: 1-84102-155-5] (CD-ROM)
- Asadullah, M.N. and **Rahman, S.** 2006. "Farm productivity and efficiency in rural Bangladesh: the role of education revisited". In Warren, M. and Yarwood, R. (eds.) *Proceedings of the Rural Futures Conference on The Rural Citizen: Governance, culture and wellbeing in the 21st century*. April 5 – 7, 2006, University of Plymouth, UK. [ISBN: 1-84102-155-5] (CD-ROM)
- 2005 **Rahman, S.** 2005. "Environmental impacts of technological change in Bangladesh agriculture: farmers' perceptions, determinants and effect on resource allocation decisions". *Agricultural Economics*. Vol. 33(1): 107–116 [ISSN: 0169-5150].
- Rahman, S.** 2005. "Productivity and efficiency issues in Bangladesh agriculture". In Riley, A.P. (eds.) *New Developments in Food Policy, Control and Research*. New York: Nova Science Publishers, Inc. pp115 – 132. [ISBN 1-59454-409-3].
- 2003 **Rahman, S.** 2003. "Profit efficiency among Bangladeshi rice farmers". *Food Policy*. Vol. 28: 487–504 [ISSN: 0306-9192]
- Rahman, S.** 2003. "Environmental impacts of modern agricultural technology diffusion in Bangladesh: an analysis of farmers' perceptions and their determinants". *Journal of Environmental Management*. Vol. 68(2): 183–191. [ISSN: 0301-4797]
- Rahman, S.** 2003. "Farm-level pesticide use in Bangladesh: determinants and awareness". *Agriculture, Ecosystems and Environment*. Vol. 95(1): 241–252. [ISSN: 0167-8809]
- Coelli, T., **Rahman S.**, and Thirtle, C. 2003. "A stochastic frontier approach to total factor productivity measurement in Bangladesh crop agriculture, 1961–1992". *Journal of International Development*. Vol. 15(3): 321–333. [ISSN: 0954-1748]
- Rahman, S.** and Hossain, M. Z. 2003. "Determinants of pesticide use in hybrid vegetable and cereal seed production in Bangladesh: a Tobit-decomposition analysis". *Asian Profile*. Vol. 31(5): 429–441. [ISSN: 0304-8675]

- Rahman, S.** and Hossain, M. Z. 2003. "Pesticide demand in hybrid seed production technology". *Food, Agriculture, and Environment*. Vol. 1(3&4): 174–179. [ISSN: 1459-0255] It is an abridged reprint of Rahman and Hossain, (2000).
- 2002 Coelli, T., **Rahman, S.** and Thirtle, C. 2002. "Measurement of agricultural performance: a non-parametric approach to the measurement of technical, allocative, cost and scale efficiency in rice cultivation in Bangladesh". *Journal of Agricultural Economics*. Vol. 53(3): 607–626. [ISSN: 0021-857x]
- Holloway, G., Shankar, B. and **Rahman, S.** 2002. "Bayesian spatial probit estimation: a primal and an application to HYV rice adoption". *Agricultural Economics* Vol. 27(3): 383–402. [ISSN: 0169-5150]
- Rahman, S.** and Ahmed, K.K. 2002. "Performance of fisheries sector planning in Bangladesh". *Outlook on Agriculture*. Vol. 31(4): 243–251. [ISSN: 0030-7270]
- Rahman, S.** 2002. "Technological change and food production sustainability in Bangladesh agriculture". *Asian Profile*. Vol. 30 (3): 233–245. [ISSN: 0304-8675]
- Hossain, Z., Sharmin, L. and **Rahman, S.** 2002. "Use and handling practices of pesticide in hybrid vegetables and maize seed production in Bangladesh: a case study of BRAC contract farmers". In Herrmann, A., and Schumman, S. (eds.) *Proceedings of the International Workshop on Environmental Risk Assessment of Pesticides and Integrated Pesticide Management in Developing Countries*, 6 – 9 November 2001, Kathmandu, Nepal. *Landschaftsökologien und Umweltforschung*, Vol. 38: 49–61. Technical University of Braunschweig, Germany. [ISSN: 0170-7299].
- 2001 Ahmed, K.K., Hambrey, J.B., and **Rahman, S.** 2001. "Trends in inter-annual yield variation of reservoir fisheries in Bangladesh, with special reference to Indian major carps". *Lakes and Reservoirs: Research and Management*. Vol. 6(1): 85–94. [ISSN: 1320-5331]
- Ahmed, K.K., **Rahman, S.** and Chowdhury, M.A.K. 2001. "Role of tribal women in reservoir fisheries, Bangladesh". In Williams, M.J., Nandeesh, M.C., Coral, V.P., Tech, E., and Choo, P.S. (eds.) *International Symposium on Women in Asian Fisheries*. ICLARM, Malaysia. [ISBN: 983-2346-02-9].
- Hossain, Z., Sharmin, L., and **Rahman, S.** 2001. "Pesticide use and awareness of hybrid vegetables and maize seed producers in Bangladesh: a case study of BRAC contract farmers". In Herrmann, A. and Schumman, S. (eds.) *Abstracts of the International Workshop on Environmental Risk Assessment of Pesticides and Integrated Pesticide Management in Developing Countries*, 6 – 9 November 2001, Kathmandu, Nepal. *Landschaftsökologien und Umweltforschung*, Vol. 36: 29. Technical University of Braunschweig, Germany. [ISSN 0170-7299].
- 2000 **Rahman, S.** 2000. "Women's employment in Bangladesh agriculture: composition, determinants and scope". *Journal of Rural Studies*. Vol. 16(4): 497–507. [ISSN: 0743-0167]
- Rahman, S.**, and Routray, J.K. 2000. "A holistic approach to the evaluation of socio-economic and environmental impacts of technological change in agriculture: an application in Bangladesh". In Lee, N., and Kirkpatrick, C. (eds.) *Sustainable Development and Integrated Appraisal in a Developing World*. Cheltenham: Edward Elgar, UK. [ISBN: 1-84064-162-2].

- Rahman, S.** and Routray, J.K. 2000. "Regional variation in agricultural development in Bangladesh and policy implications". *Indian Journal of Regional Science*. Vol. 32(1): 1–13. [ISSN: 0046-9017]
- Rahman, S.** and Hossain, M. Z. 2000. "Pesticide demand among hybrid vegetable and cereal seed producers in Bangladesh: a simultaneous equation analysis". *Bangladesh Journal of Agricultural Economics*. Vol. 23(1&2): 91–102. [ISSN: 0207-3539]
- 1999 **Rahman, S.** 1999. "The impact of technological change on income distribution and poverty in Bangladesh agriculture: an empirical analysis". *Journal of International Development*. Vol. 11(7): 935–955. [ISSN: 0954-1748]
- Rahman, S.** and Thapa, G.B. 1999. "Environmental impacts of technological change in Bangladesh agriculture: farmers' perceptions and empirical evidence". *Outlook on Agriculture*. Vol. 28(4): 233–238. [ISSN: 0030-7270]
- Rahman, S.**, and Routray, J.K. 1999. "Socio-economic and environmental impacts of technological change in Bangladesh agriculture". In McCabe, M. (ed.) *Environmental Impact Assessment: Case Studies from Developing Countries, Book 3*. Fargo: International Association for Impact Assessment (IAIA), North Dakota, USA.
- Routray, J.K., Gengaje, R.K., and **Rahman, S.** 1999. "Concept paper on rural road development and management". In Routray, J.K., and Gengaje, R.K. (eds.) *Proceedings of the ILO-AIT Regional Workshop on Participatory Framework for Planning Rural Road Networks, Construction and Maintenance: Present Practice and Implications for Developing Countries of Asia*. Bangkok: School of Environment, Resources and Development, Asian Institute of Technology, Thailand [ISBN: 974-8208-20-6].
- Ahmed, K.K., **Rahman, S.**, and Chowdhury, M.A.K. 1999. "Role of tribal women in reservoir fisheries of Bangladesh". *Aquaculture Asia*. Vol. 4(1): 12–15. [ISSN: 0859-600x]
- Rahman, S.** 1999. "Technological change and food production sustainability in Bangladesh agriculture: an empirical analysis". *Bangladesh Journal of Agricultural Economics*. Vol. 22 (2): 1–17. [ISSN: 0207-3539]
- 1998 **Rahman, S.**, and Routray, J.K. 1998. "Technological change and women's participation in crop production in Bangladesh". *Gender, Technology and Development*. Vol. 2(2): 243–267. [ISSN: 0971-8524]
- Chowdhury, M.A.K. and **Rahman, S.** 1998. "Women's participatory role in oxbow lake fisheries management: A case from Bangladesh". *Aquaculture Asia*. Vol. 3(2): 3–6. [ISSN: 0859-600x]
- Rahman, S.** 1998. "Energy demand perspectives in Bangladesh, (1992/93 – 2019/20)". *Bangladesh Journal of Agricultural Economics*. Vol. 21(1 and 2): 39–57. [ISSN: 0207-3539]
- 1997 **Rahman, S.** 1997. "BRAC and women's empowerment". *Gender, Technology and Development*. Vol. 1(1): 151–158. [ISSN: 0971-8524]
- Sriboonchitta, S., and **Rahman, S.** 1997. "Analysis of factor demand in conjunction with rice variety selection using switching regression" (in Thai). *Journal of Economics*. Vol. 2(3): 42–65. [ISSN: 0859-8479]

- Rahman, S.** 1997. "Joint determination of demand for inputs and choice of rice varieties: A Meta-Production Function approach". In Radanachalee, T., Rodpradub, R., and Suthirawattana, W. (eds.) *Agricultural Systems Program Thesis Abstracts (1988-1996)*. March. Chiang Mai: Chiang Mai University, Thailand. [ISBN: 974-656-040-9].
- 1996 **Rahman, S.** 1996. "The fine arts of silk production - spin-offs for rural women". *Agroforestry Today*. Vol. 8(3): 9–11. [ISSN: 0255-8173]
- Rahman, S.** 1996. "Energy demand forecasts in Bangladesh". *Grassroots: an alternative development journal*. Vol. 5(19): 5–16.
- 1995 **Rahman, S.**, and Sriboonchitta, S. 1995. "Joint determination of demand for inputs and choice of rice varieties in northern Thailand". *Bangladesh Journal of Agricultural Economics*. Vol. 18(1): 1–20. [ISSN: 0207-3539]
- Rahman, S.** 1995. "Wildlife in Bangladesh: a diminishing resource". *Tigerpaper*. Vol. 22(3): 7–14. [ISSN: 1014-2789].
- Rahman, S.** 1995. Book review. Monica Das Gupta, Lincoln C. Chen, and T.N. Krishnan (eds.) *Women's Health in India: Risk and Vulnerability*. Oxford University Press, Bombay, India, 1995. *Gender, Technology and Development*. Vol. 2(1): 131–135. [ISSN: 0971-8524]
- Rahman, S.** 1995. "Wildlife conservation in Bangladesh". *Grassroots: an alternative development journal*. Vol. 5(17): 7–16.
- 1994 **Rahman, S.** 1994. "Profit efficiency among rice producers in northeast and northern Thailand". *Bangladesh Journal of Agricultural Economics*. Vol. 17(1and 2): 17–29. [ISSN: 0207-3539]
- Jahan, S., **Rahman, S.** and Sattar, M.G. 1994. "Training for capacity development of the rural poor: Findings from study on a BRAC course". *Proshikhyan*. Vol. 1(2): 34–53.
- Rahman, S.** 1994. "Environment, people and sustainable development: role of NGOs". *Grassroots: an alternative development journal*. Vol. 4(13&14): 94–99.
- Rahman, S.** 1994. "Agroforestry in Bangladesh: need for a collaborative effort". *Grassroots: an alternative development journal*. Vol. 3(9): 5–16.
- 1993 Mustafa, S., **Rahman, S.** and Sattar, G. 1993. "Bangladesh Rural Advancement Committee (BRAC): Backyard poultry and landless irrigators program". In Farrington, J., and Lewis, D.J. (eds.) *Non-government Organizations and The State in Asia: Rethinking Roles in Sustainable Agricultural Development*. London: Routledge, UK. [ISBN: 0-415-08848-8].
- 1991 Mustafa, S., **Rahman, S.** and Sattar, G. 1991. "Technology development and diffusion: A case study of collaboration between BRAC and the government of Bangladesh". *Bangladesh Journal of Extension Education*. Vol. 6(Special Issue): 1–52. [ISSN: 1011-3916]
- Rahman, S.**, and Bhuiyan, S.R. 1991. "Planning experience and Fourth Five Year Plan for livestock development". *Farm Economy*. Vol. 8: 97–108.
- Bhuiyan, S. R., and **Rahman, S.** 1991. "Fisheries planning performance and Fourth Five Year Plan". *Farm Economy*. Vol. 8: 109–122.

Research/Project Reports

- 2005 Asadullah, M. N., and **Rahman, S.** 2005. *Farm productivity and efficiency in rural Bangladesh: the role of education revisited*. CSAE WPS/2005-10. Oxford: Center for Studies on African Economies, Department of Economics, University of Oxford, UK. (Available @ <http://www.csaef.ox.ac.uk/workingpapers/pdfs/2005-10text.pdf>).
- 2004 Agarwal, S., Courtney, P., **Rahman, S.**, Moseley, M., and Errington, A. 2004. *Determinants of Relative Economic Performance of Rural Areas*. Research Report prepared for DEFRA, UK (p. 192). Seale-Hayne Campus, Newton Abbot: Rural and Tourism Research Group, University of Plymouth and Countryside and Community Research Unit (CCRU), University of Gloucestershire, UK. (Available @ http://www.defra.gov.uk/rural/pdfs/research/drep/contents_exec_summ.pdf)
- 2003 **Rahman, S.** 2003. *Resource use efficiency with self-selectivity: an application of a switching regression framework to stochastic frontier models*. SES Discussion Paper Series, No. 0301. Manchester: School of Economic Studies, University of Manchester, UK. (Available @ http://www.socialsciences.man.ac.uk/economics/research/Discussion_paper_0301.pdf)
- 2002 **Rahman, S.** 2002. *Profit efficiency among Bangladeshi rice farmers*. SES Discussion Paper Series, No. 0203. Manchester: School of Economic Studies, University of Manchester, UK. (Available @ http://www.socialsciences.man.ac.uk/economics/research/Discussion_paper_0203.pdf)
- 2001 **Rahman, S.** 2001. *SHAHAR Project History: Learning from Experience in Urban Programming* (p. 45). Dhaka: CARE Bangladesh and International Food Policy Research Institute, Washington, D.C., USA. (Available @ <http://www.ifpri.org/themes/mp14/unpublished/shaharprojhist.pdf>)
- Rahman, S.**, and Alam, M. 2001. *Baseline Survey Report: Livelihood Security Analysis of Urban Vulnerable Households (Jessore and Tongi Pourashavas)* (p. 175). Dhaka: CARE Bangladesh and International Food Policy Research Institute, Washington, D.C., USA (Available @ <http://www.ifpri.org/themes/mp14/unpublished/shaharexecsum.pdf>)
- Rahman, S.** 2001. *Community Profile Report: Livelihood Analysis of 30 Urban Vulnerable Communities (Dinajpur and Mymensingh Pourashavas)* (p. 102). Dhaka: CARE Bangladesh and International Food Policy Research Institute, Washington, D.C., USA.
- Rahman, S.**, and Alam, M. 2001. *Census Survey Report II: Livelihood Analysis of Urban Vulnerable Households (Dinajpur and Mymensingh Pourashavas)* (p. 45). Dhaka: CARE Bangladesh and International Food Policy Research Institute, Washington, D.C., USA.
- Rahman, S.** and Alam, M. 2001. *Census Survey Report: Livelihood Analysis of Urban Vulnerable Households (Jessore and Tongi Pourashavas)* (p. 43). Dhaka: CARE Bangladesh and International Food Policy Research Institute, Washington, D.C., USA.
- 2000 **Rahman, S.**, Hossain, Z., and Sharmin, L. 2000. *Cumulative Environmental Effects Assessment of BRAC's Agriculture, Fisheries and Poultry Program*. RED Research Report (p. 45). Dhaka: BRAC, Bangladesh.
- 1999 Thirtle, C., Shankar, B., and **Rahman, S.** 1999. *A Survey of Methodologies for Estimating the Returns to R&D Investments Related to the Oxford Forestry Institute Pines Project* (p. 45). Research Report prepared for the Natural Resources Institute (NRI), University of Greenwich, UK. Reading: Department of Agricultural and Food Economics, University of Reading, UK.

- 1996 **Rahman, S.** 1996. *Technological Change in Agriculture: A Review of Models, Concepts, Measurement Methods and Empirical Estimations*. Special Study Project Report (SSPR # HS: 96-2). Bangkok: Asian Institute of Technology, Thailand.
- 1994 **Rahman, S.** 1994. *Credit for Rural Women: Role of NGOs*. RED Research Report (p. 19). Dhaka: BRAC, Bangladesh.
- Rahman, S.**, and Raje, G. 1994. *Energy*. Background paper prepared for the Indian adaptation of the World Resources Institute's Teacher's Guide (p. 45). Ahmedabad: Centre for Environment Education (CEE), India.
- Rahman, S.** 1994. *Addressing Poverty and Environment: An Overview of BRAC's Approach to Sustainable Development*. RED Research Report (p. 45). Dhaka: BRAC, Bangladesh.
- 1993 **Rahman, S.**, Sriboonchitta, S., and Wiboonpongse, A. 1993. *Joint Determination of Demand for Inputs and Choice of Rice Varieties: A Meta-Production Function Approach*. Agricultural Economics Report No. 34. Chiang Mai: Multiple Cropping Centre, Chiang Mai University, Thailand.
- 1990 **Rahman, S.** 1990. *Who Don't Get Loan and Why: A Look into Unequal Credit Mobility in Landless Groups*. RED Research Report (p. 52). Dhaka: BRAC, Bangladesh.
- 1989 **Rahman, S.** 1989. *BRAC Social Forestry Programme*. RED Research Report (p. 15). Dhaka: BRAC, Bangladesh.
- Rahman, S.** 1989. *Social Forestry in Bangladesh: Context: Problems, Responses and Recommendations*. RED Research Report (p. 66). Dhaka: BRAC, Bangladesh.
- Mustafa S., and **Rahman, S.** 1989. *Planning and Project Appraisal: A Brief on Deep Tubewell Irrigation Program of BRAC*. RED Research Report (p. 41). Dhaka: BRAC, Bangladesh.
- Ahmad, Z., Rahman, A.K.M.A., and **Rahman, S.** 1989. *Bangladesh Shrimp Culture Project: Baseline Survey, 1988*. RED Research Report (p. 236). Dhaka: BRAC, Bangladesh.

CONFERENCE/SEMINAR PRESENTATIONS

- 2006 Asadullah, M.N. and **Rahman, S.** 2006. "Farm productivity and efficiency in rural Bangladesh: the role of education revisited". Paper presented at the 26th Triennial Conference of the International Association of Agricultural Economists (IAAE) on *Contribution of Agricultural Economics to Critical Policy Issues* held at Gold Coast Convention Centre, Queensland, Australia during August 12 – 18, 2006. (Available @ http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=22428&ftype=.pdf)
- Rahman, S.** and Hasan, M.K. 2006. "Efficiency effects of environmental and managerial factors: the case of wheat producers in Bangladesh". Paper presented at the Rural Futures Conference held at the University of Plymouth, UK during April 5 – 7, 2006.
- Asadullah, M.N. and **Rahman, S.** 2006. "Farm productivity and efficiency in rural Bangladesh: the role of education revisited". Paper presented at the Rural Futures Conference held at the University of Plymouth, UK during April 5 – 7, 2006.
- 2005 **Rahman, S.** 2005. "Environmental impacts of technological change in Bangladesh agriculture: farmers' perceptions, determinants, and effects on resource allocation decisions". Paper presented

at the Invited Seminar at the Faculty of Economics, Chiang Mai University, Chiang Mai, Thailand on May 13, 2005.

Rahman, S. 2005. “Regional productivity and convergence in Bangladesh agriculture”. Paper presented at the 79th Annual Meeting of the Agricultural Economics Society (AES) held at University of Nottingham, UK during April 4–6, 2005.

- 2004 **Rahman, S.** 2004. “Regional productivity differences and prospect for convergence in Bangladesh agriculture, 1964–1992”. Paper presented at the Annual Meeting of the American Agricultural Economics Association (AAEA) held at Adam’s Mark Hotel, Denver, Colorado, USA during August 1– 4, 2004. (Available @ http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=14535&ftype=.pdf)

Rahman, S. 2004. “Technological change, productivity and soil fertility relationships in Bangladesh agriculture”. Poster presented at the 78th Annual Conference of the Agricultural Economics Society (AES) held at the Imperial College London, UK during April 2–4, 2004.

- 2003 **Rahman, S.** 2003. “Profit efficiency among Bangladeshi rice farmers”. Paper presented at the 25th Triennial Conference of the International Association of Agricultural Economists (IAAE) on *Reshaping Agriculture’s Contribution to Society* held at the International Convention Centre, Durban, South Africa during August 16–22, 2003. (Available @ http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=10395&ftype=.pdf)

Rahman, S. 2003. “Environmental impacts of modern agricultural technology diffusion in Bangladesh: an analysis of farmers’ perceptions and their determinants”. Paper presented at the 77th Annual Conference of the Agricultural Economics Society (AES) held at the University of Plymouth, Seale-Hayne Campus, Newton Abbot, UK during April 11–14, 2003.

- 2002 **Rahman, S.** 2002. “Resource use efficiency with self-selectivity: an application of a switching regression framework to stochastic frontier models”. Paper presented at the CAFRE (Center for Agriculture, Food and Resource Economics) Seminar Series held at the School of Economic Studies, University of Manchester, UK on December 10, 2002.

Rahman, S. 2002. “Farm-level pesticide use in Bangladesh: determinants and awareness”. Paper presented at the CAFRE (Center for Agriculture, Food and Resource Economics) Seminar Series held at the School of Economic Studies, University of Manchester, UK on March 19, 2002.

- 2001 Hossain, Z., Sharmin, L., and **Rahman, S.** 2001. “Pesticide use and awareness of hybrid vegetables and maize seed producers in Bangladesh: a case study of BRAC contract farmers”. Paper presented at the International Workshop on *Environmental Risk Assessment of Pesticides and Integrated Pesticide Management in Developing Countries* held at Radisson Hotel, Kathmandu, Nepal during November 6–9, 2001.

- 2000 **Rahman, S.**, and Coelli, T. 2000. “Total factor productivity measurement in Bangladesh crop agriculture using stochastic frontier approach, (1960/61 – 1991/92)”. Paper to be presented at the 24th Triennial Conference of the International Association of Agricultural Economists (IAAE) on *Tomorrow’s Agriculture: Incentives, Institutions, Infrastructure, and Innovations* held at Haus am Kolnischen Park, Berlin, Germany during August 13–18, 2000.

- 1999 **Rahman, S.**, and Shankar, B. 1999. “Profits, supply and HYV adoption in Bangladesh”. Paper presented at the ESRC-DESG (Economic and Social Research Council – Development Economics Study Group) Annual Conference on *Development Economics for the New Millenium* held at the University of Reading, UK during July 9–10, 1999.

- Rahman, S.**, and Thirtle, C. 1999. "Inefficiency or measurement error and mis-specification: frontiers for rice in Bangladesh." Paper presented at the ESRC-DESG (Economic and Social Research Council – Development Economics Study Group) Annual Conference on *Development Economics for the New Millenium* held at the University of Reading, UK during July 9–10, 1999.
- Rahman, S.**, and Routray, J.K. 1999. "Socio-economic and environmental impacts of technological change in Bangladesh agriculture: an empirical analysis". Paper presented at the 19th Annual Conference of the International Association for Impact Assessment on *Forecasting the Future: Impact Assessment for a New Century* held at the University of Strathclyde, Glasgow, UK during June 15–19, 1999.
- Rahman, S.** 1999. "Impact of technological change on income distribution and poverty in Bangladesh agriculture: an empirical analysis". Paper presented at the DSA/ESRC Policy Workshop on *The New Poverty Strategies (1990 – 99): What have they achieved? What have we learned?* held at the University of Reading, UK during April 9–10, 1999.
- Rahman, S.** and Routray, J.K. 1999. "Socio-economic and environmental impacts of technological change in Bangladesh agriculture". Paper presented at DAFE (Department of Agricultural and Food Economics) Seminar held at the University of Reading, UK on March 22, 1999.
- Rahman, S.** 1999. "Farm-level decision analysis of alternative foodgrain (rice and wheat) production technologies in Bangladesh: a 'Meta-Production Function' approach". Paper presented at the ESRC-DESG (Economic and Social Research Council – Development Economics Study Group) Seminar held at London School of Economics and Political Science (LSE), London, UK during February 4, 1999.
- 1998 Routray, J.K., Gengaje, R.K., and **Rahman, S.** 1998. "Concept paper on rural road development and management". Paper presented at the ILO-AIT Regional Workshop on *Participatory Framework for Planning Rural Road Networks, Construction and Maintenance: Present Practice and Implications for Developing Countries of Asia* held at the Asian Institute of Technology, Bangkok, Thailand during November 30–December 2, 1998.
- Rahman, S.** 1998. "Technological change and food production sustainability in Bangladesh agriculture". Paper presented at the IX Pacific Science Inter-Congress on *Sustainable Development in the Pacific* held at Academia Sinica, Taipei, Taiwan during November 16–18, 1998.
- Ahmed, K.K., **Rahman, S.**, and Chowdhury, M.A.K. 1998. "Role of tribal women in reservoir fisheries, Bangladesh". Paper presented at the Fifth Asian Fisheries Forum on *Fisheries and Food Security beyond the Year 2000*. November 11–14, 1998. Bangkok: Asian Fisheries Society, Aquatic Resources Research Institute, Chulalongkorn University, Thailand.
- Rahman, S.**, and Routray, J.K. 1998. "A holistic approach to evaluate socio-economic and environmental impacts of technological change in agriculture: an application in Bangladesh". Paper presented at the Second International Conference on *Impact Assessment in the Development Process: Advances in Integrating Environmental Assessment with Economic and Social Appraisal* held at the University of Manchester, UK during October 23–24, 1998.
- Rahman, S.** 1998. "Technological change and women's employment in Bangladesh agriculture: an empirical analysis". Paper presented at the Regional Conference on *Gender and Technology in Asia*, held at the Asian Institute of Technology (AIT), Bangkok, Thailand during August 4–7, 1998.

- Rahman, S.**, and Routray, J.K. 1998. "Technological change and demand for women labour in Bangladesh agriculture". Paper presented at the Second International Conference on *Women in Agriculture* held at Omni-Shoreham Hotel, Washington, D.C., USA during June 28–July 2, 1998.
- 1992 **Rahman, S.** 1992. "Joint Determination of Demand for Inputs and Choice of Rice Varieties: A Meta-Production Function Approach". Paper presented at the AGS (Agricultural Systems) Seminar at Multiple Cropping Centre, Chiang Mai University, Thailand on November 18, 1992.
- 1991 **Rahman, S.**, and Bhuiyan, S.R. 1991. "Planning experience and Fourth Five Year Plan for livestock development". Paper presented at the 8th National Conference of the Bangladesh Agricultural Economists Association on *Policies for Agricultural Development in the Fourth Five Year Plan* held at Bangladesh Agricultural Research Council, Dhaka during February 7–8, 1991.
- Bhuiyan, S.R., and **Rahman, S.** 1991. "Fisheries planning performance and Fourth Five Year Plan for Livestock Development". Paper presented at the 8th National Conference of the Bangladesh Agricultural Economists Association on *Policies for Agricultural Development in the Fourth Five Year Plan* held at Bangladesh Agricultural Research Council, Dhaka during February 7–8, 1991.

REFERENCES

Professor David R. Colman, O.B.E.

Emeritus Professor of Agricultural Economics
 School of Economic Studies
 University of Manchester
 Oxford Road, Manchester, M13 9PL, UK
 Phone: +44 (0161) 275 4804; Fax: +44 (0161) 275 4812
 E-mail: David.Colman@man.ac.uk

Professor Colin G. Thirtle

Professor of Agricultural Development Economics
 Department of Environmental Science and Technology
 Imperial College of Science, Technology and Medicine
 University of London
 RSM Building, Prince Consort Road, London, SW7 2BP, UK
 and
Extraordinary Professor
 University of Pretoria
 Pretoria, 0002, Republic of South Africa
 and
 University of Stellenbosch
 Stellenbosch, Republic of South Africa
 Phone: +44 (0207) 594 9337 (O), (0208) 995 3437 (R); Fax: +44 (0207) 594 9304, (0208) 995 3437
 E-mail: C.Thirtle@ic.ac.uk

Professor PingSun Leung

Professor
 Department of Molecular Biosciences and Bioengineering
 University of Hawaii at Manoa
 Ag.Sci 218, 1955, East-West Road #218, Gilmore 123, Honolulu, Hawaii 96822, USA.
 Phone: (808) 956 8562; Fax: (808) 956 9269
 E-mail: psleung@hawaii.edu

Professor Jayant K. Routray

Coordinator

Regional and Rural Development Planning
School of Environment, Resources and Development (SERD)
Asian Institute of Technology (AIT)
P.O. Box: 4, Klongluang, Pathumthani - 12120, Thailand
Phone: (66-2) 524 6387, 524 5612; Fax: (66-2) 524 6431
E-mail: routray@ait.ac.th

Dr. Ahmed Mushtaque R. Chowdhury

Dean

James P. Grant School of Public Health
BRAC University
and

Deputy Executive Director

BRAC Center, 356, Mohakhali C/A, Dhaka - 1212, Bangladesh
Phone (PABX): (880-2) 8824180 to 87, 9881265; Fax: (880-2) 8823542, 8823614
E-mail: mushtaque.arc@brac.net