

CURRICULUM VITAE

Dr Ashley Stewart Halls

Date of Birth: 18th May 1967
Marital Status: Married, three children.
Nationality: British.

Academic Record:

1998 Ph.D. Applied Population Biology, Imperial College, University of London.
1992 M.Sc. (with Distinction) Applied Marine Science, University of Plymouth.
1991 B.Sc. (Hons) First Class, Fisheries Science, University of Plymouth.

Employment Record:

2009 to date Director, Aquae Sulis Limited (ASL), Bath, UK.
2007- 2009 Senior Programme Officer (P5/III), Fisheries Programme, Mekong River Commission Secretariat, Phnom Penh, Cambodia.
2005 - 2007 Director, Aquae Sulis Limited (ASL), Bath, UK.
1998 - 2005 Senior Fisheries Consultant, Marine Resources Assessment Group (MRAG) Ltd., London.
1998 - 2001 Research Assistant (part-time), Renewable Resources Assessment Group, Imperial College, University of London.
1993 - 1997 Fisheries Consultant, Marine Resources Assessment Group (MRAG) Ltd., London.

Profile and Key Experience:

An inland fisheries specialist with more than 15 years' experience in developing countries in Asia and Africa spanning almost 40 projects for DfID, FAO, EU and the MRC in the following areas:

- Fisheries biology and (co-)management.
- Dam, flood control and irrigation project impact forecasting, assessment and mitigation.
- Climate change and fisheries – impact forecasting and adaptation.
- Stock assessment, population dynamics modelling and bio-statistical analysis.
- Design of fisheries surveys and data collection systems.

Overseas Experience:

Cambodia; Lao PDR, Vietnam, Thailand; Indonesia; Malaysia; India; Bangladesh; Egypt; Uganda; Kenya; Tanzania; Zanzibar; South Africa; Turks and Caicos Islands; Italy; Denmark; Spain; Kazakhstan, Iran, Russia; Turkmenistan; Azerbaijan.

Post Details:

2007- 2009 **Senior Programme Officer (P5/III), Fisheries Programme, Mekong River Commission Secretariat (MRC).**

Design and regional implementation and coordination of ecological research to forecast, assess and mitigate the impacts of development plans and climate change on the fisheries of the lower Mekong basin with support staff, riparian research institutions and line agencies in Cambodia, Lao PDR, Thailand and Vietnam. Core duties included the provision of technical support to fisheries agencies and other MRC Programmes, budget planning and administration, capacity building, reporting and dissemination.

Project Details (Consulting Work with MRAG and ASL [1993 – to date]):

Under contract to the British Governments' Department for International Development (DfID), the FAO, the European Union (EU); the Mekong River Commission Secretariat (MRC), UNOPS and private clients on the following projects:

- 2010 ***Caspian Environment (CaspEco) Programme (CEP) 'Enhancing Connectivity' Project.*** Identification and development of fish passes and fish habitat restoration activities with national experts to rebuild depleted populations of sturgeon and salmon impacted by dams in the tributaries of the Caspian Sea. **Position:** International Expert in Fish Ecology; **Client:** UNOPS; **Location:** Astana, Kazakhstan, Iran, Azerbaijan; Russia, Turkmenistan.
- 2009 ***Assessment of the Fisheries Impacts of Basin Development Plans for the Lower Mekong Basin.*** Quantitative fisheries impact assessment of plans to develop the Mekong basin including the construction of mainstream and tributary dams, and the expansion of irrigation. The study included modelling impacts to the fisheries sector arising from the obstruction of fish migrations by dams, and flow changes brought about by irrigation abstractions. **Position:** Senior Fisheries Expert; **Client:** Mekong River Commission Secretariat; **Location:** Vientiane, Lao PDR.
- 2006 ***Technical Assistance to the WorldFish Centre: Phase II.*** Re-assessment of the DFID-funded Community-Based Fisheries Management (CBFM) Project dataset (see 2005 below) following the completion of the Project's monitoring programme. Preparation of policy briefs describing project impacts and promoting important policy lessons. **Position:** Project Leader; **Client:** WorldFish Centre; **Location:** UK and Bangladesh.
- 2006 ***Evaluation of the Implementation of the Catch Assessment Survey (CAS) for Lake Victoria.*** Evaluation of the design and implementation of an improved CAS for Lake Victoria (see 2005 below) including a review of options for more optimal allocation of sampling effort using simulation modelling. **Position:** Study Leader; **Client:** MRAG on behalf of the EU and the Lake Victoria Fisheries Organisation (LVFO); Collaborators: Reading University Statistical Services Centre; **Location:** UK, Uganda, Kenya and Tanzania.
- 2006 ***Assessment of the Impact of the DFID Fisheries Management Science Programme.*** Impact assessment questionnaire design, followed by meetings and interviews with stakeholders from key fisheries institutions and research organisations globally to determine the impact and utility of the FMSP. **Position:** Senior Consultant; **Client:** MRAG on behalf of DFID; **Location:** UK; Italy and Tanzania.
- 2005 ***Evaluation and Uptake Promotion of Data Collection Guidelines for Co-Managed Fisheries (R8462).*** In collaboration with target institutions, the project applied guidelines developed under Project R8285 for designing and implementing fisheries data collection and sharing mechanisms for co-management in a range of different settings, revised and adapted them, and promoted them widely in a variety of appropriate formats to relevant stakeholders in countries where capture and enhancement fisheries are important to the livelihoods of the poor. **Position:** Principal investigator; **Client:** MRAG on behalf of DFID; Collaborators: FAO, MRC,

WorldFish Centre. **Location:** UK and Bangladesh.

- 2005 ***Promoting New Knowledge of Climate Change Impacts on Fisheries (R8457)***. The project aimed to further synthesise and promote the new knowledge generated by project R4778J to key communication stakeholders, with the aim of promoting the uptake of recommendations. **Position:** Senior Consultant; **Client:** MRAG on behalf of DFID; Collaborators: CEFAS, UEA. **Location:** UK.
- 2005 ***Design of Catch Assessment and Frame Surveys for Lake Victoria***. Refinement of the existing catch assessment survey (CAS) by improving reporting relevance, survey coverage, accuracy, and sampling efficiency. Guidelines for involving Beach Management Units (BMUs) in the collection and sharing of catch and effort information in the context of co-management were developed in anticipation of changes to stakeholder roles and responsibilities surrounding management planning, implementation and evaluation. **Position:** Senior Consultant; **Client:** MRAG on behalf of Lake Victoria Fisheries Organisation (LVFO); Collaborators: Reading University Statistical Services Centre; **Location:** UK, Uganda, Kenya, Tanzania.
- 2005 ***Promotion of FMSP Guidelines for Floodplain Fisheries Management and Sluice Gate Control (R8486)***. The project was designed to deliver the lessons on floodplain fisheries management derived from various DFID projects to local fisheries and polder managers in Bangladesh and policy makers in South and South East Asia to improve floodplain management policies and practices to help poor fishers. **Position:** Senior Consultant; **Client:** MRAG on behalf of DFID; Collaborators: IIED, Scales, BCAS, CNRS. **Location:** UK, Bangladesh and India.
- 2005 ***Technical Assistance to the WorldFish Centre***. The study aimed to determine the impact of the DFID-funded Community-Based Fisheries Management (CBFM) Projects on fish production, resource sustainability and fisher well-being in Bangladesh. The study involved the analysis of data collected from up to 120 CBFM and control sites representing a range of different habitat type and geographic location. Performance indicators relating to production, resource sustainability (including biodiversity) and fisher well-being were developed together with more than 15 explanatory variables hypothesised to affect management performance. Impacts of the CBFM were examined using general linear models (GLMs), time series analysis and multivariate comparisons of species assemblages. **Position:** Project Leader; **Client:** MRAG on behalf of WorldFish Centre; **Location:** UK and Bangladesh.
- 2005 ***Synthesis of FMSP Experience and Lessons Learned for Fisheries Co-Management (R8470)***. The project aimed to improve decision-making, policy development and programme and project implementation in DFID, as well as other key organisations, by providing information, in the most appropriate form, regarding lessons that have been learnt concerning co-management through FMSP research. Many of these lessons have applicability beyond fisheries co-management and can inform more widely approaches to natural resources management. **Position:** Senior Consultant; **Client:** MRAG on behalf of DFID. **Location:** UK.
- 2004 ***Stock Assessment and Fishery Management Guidelines***. Promotion of methods and

tools developed under DFID's Fisheries Management Science Programme in the form of an *FAO Fisheries Technical Paper* with accompanying software. **Position:** Co-author (see publications below) **Client:** DFID; **Location:** London.

- 2004 ***Vulnerability of Fisherfolk Living in Poverty to Climate Change (R4778J).*** The project examined the potential impact of climate change on the sustainability of capture and enhancement fisheries important to poor people. Using data sets linking climate factors and fish population dynamics, fishery production or aquatic habitat quality, the project developed risk scenarios for relevant fisheries. **Position:** Senior Consultant; **Client:** DFID; Collaborators: University of East Anglia, CEFAS Laboratory, Lowestoft; **Location:** UK.
- 2004 ***Water Flow and Level Criteria for Coarse Fish and Conservation Species.*** Application of population dynamics models to explore of the risk of water abstraction from UK rivers on the production and exploitable biomass of selected fish species. **Position:** Senior Consultant; **Client:** Environment Agency; **Location:** London & Hull.
- 2004 ***Decision-Support Tools for the Allocation of Water for Floodplain Rivers and their Fisheries.*** Identification of models and approaches for quantifying the affects of changes to flows in river systems on fisheries and agriculture in support of the 'Challenge Programme on Water and Food'. **Position:** Senior Consultant; **Client:** The WorldFish Centre. **Location:** London, Cambodia, Egypt.
- 2003 ***Fisheries Data Collection and Sharing Mechanisms for Co-Management (R8285).*** With an emphasis upon participatory research involving key stakeholders at all levels of management, but particularly poor fishers, the project aimed, through consultation, discussion and negotiation, to identify and develop cost-effective (participatory) data collection and sharing mechanisms to improve the (co-)management of capture and enhancement fishery resources important to the livelihoods of the poor. **Position:** Principle Investigator; **Client:** DFID; Collaborators: FAO, The World Fish Centre, Mekong River Commission (MRC), Integrated Lake Management Project, SADC, Several DoFs from participating countries. **Location:** London, Bangladesh, Uganda, Tanzania, Cambodia].
- 2003 ***Better Options for Integrated Floodplain Management.*** The project sought to develop methods for the implementation of integrated fisheries management recommendations generated by an earlier DFID-funded project entitled " Maximisation of Joint Benefits from Multiple Resource Use in Bangladeshi Floodplains (R7868) (see below). The recommendations were implemented and tested with fisher communities engaged in rice farming and fishing activities. **Position:** Senior Consultant; **Client:** DFID; Collaborators: CNRS, ITAD, University of Reading; **Location:** London, Bangladesh.
- 2003 ***The Use of Sluice Gates for Stock Enhancement and Diversification of Livelihoods (R8210).*** The project aimed to improve the decision-making capacity of poor farmers/fishers in managing water resources in modified floodplains for the mutual and synergistic benefit of both rice crops and fish and thereby to provide improved, more diverse and secure livelihoods. **Position:** Senior Consultant; **Client:** DFID;

Collaborators: BCAS; **Location:** London, Bangladesh.

- 2002 ***Review of the Origins and Appropriateness of the Current Fish Stock Assessment and Management Areas for Waters around Ireland.*** This project reviewed the origins of ICES management and assessment areas, and using GIS, assessed their appropriateness (from an Irish perspective) using evaluation criteria designed to test the validity of the underlying management model assumptions and the degree of acceptable uncertainty. **Position:** Senior Consultant; **Client:** EU; Collaborators: Marine Institute, Dublin; **Location:** London, Dublin.
- 2002 ***Understanding Livelihoods Dependent on Inland Fisheries.*** Characterisation of the poor in Bangladesh, Cambodia, Laos and Vietnam, identification of their dependence upon aquatic resources, the nature and status of those resources, and the vulnerability of the poor to loss or mismanagement of these resources in these countries. Constraints and research priorities were identified through consultations with poor fishers and secondary stakeholders. **Position:** Senior Consultant; **Client:** DFID; Collaborators: ICLARM, RRAG, BCAS and national research partners; **Location:** Malaysia, London, Cambodia.
- 2002 ***Developing Guidelines for Successful Co-Management in the Caribbean.*** The project aimed to engage coastal fishing communities in successful co-management partnerships with government to improve the management of coastal resources. The project identified and documented the conditions under which co-management can be a viable management strategy, and recommended how it can be successfully implemented in the Caribbean. **Position:** Senior Consultant; **Client:** DFID; Collaborators: Caribbean Conservation Association; **Location:** London, Caribbean.
- 2002 ***Desk Study and Project Identification for the Use of Genetics in Enhancement Fisheries.*** Review of genetic-related issues and constraints associated with enhancement fisheries and identification of appropriate research strategy for DFID's Aquaculture and Genetics Research Programme (AGRP) to address these constraints to reduce poverty. **Position:** Senior Consultant; **Client:** DFID; Collaborators: Stirling University; **Location:** London.
- 2001 ***Evaluation of European Union Member States National Programs for the Collection and Management of Data (FISH/2000/AMI/RCFT/01).*** Strategic evaluations of Member States proposed national programmes for the collection and management of data needed to conduct the Common Fisheries Policy in accordance with Council Regulation No 1543/2000. **Position:** Senior Consultant; **Client:** EU; Collaborators: AZTI; **Location:** London, Spain, Brussels.
- 2000- 2002 ***Maximisation of Joint Benefits from Multiple Resource Use in Bangladeshi Floodplains (R7868).*** The project generated recommendations and guidelines for optimal fisheries and agriculture-related livelihood strategies for Bangladeshi floodplains formulated on the basis of natural resource and socio-economic evaluations for different stakeholder/income groups of alternative technical management strategies and interventions. Strategies and interventions examined included the design and mode of operation of sluice gates, dry season water abstraction activities, closed seasons and areas, crop choice and cropping patterns.

Institutional constraints to implementation were also examined. Target institutions included both future action as well as floodplain planning officials. **Position:** Senior Consultant; **Client:** DFID; Collaborators: Reading University, Newcastle University, CNRS Bangladesh; **Location:** London, Bangladesh.

- 2000 – 2002 ***Interdisciplinary Multivariate Analysis for Adaptive Co-Management (R7834).***
Phase I of this process project aimed to develop models of co-management performance (and guidelines for their construction) to help higher level managers accelerate the adaptive learning process among locally managed fisheries. General Linear and Bayesian Network models employing multi-disciplinary explanatory factors and variables were developed to predict desirable fisheries-related livelihood outcomes including production, equity, and compliance. Successful validation of the approach during a follow-on project aimed to promote improved management strategies for the benefit of poor people in south and south-east Asia and Africa. **Position:** Principle Investigator; **Client:** DFID; Collaborators: ICLARM, IFM, NARS **Location:** London, Malaysia, Denmark, South Africa.
- 1999 ***DFID Fisheries Management Science Programme (FMSP).***
Programme support activities including assisting in the development and design of the Programme research strategy and logframe, and reviewing project proposals. **Position:** Senior Consultant; **Client:** DFID; **Location:** London.
- 1998 –2000 ***Information Systems for the Co-Management of Artisanal Fisheries (R7042).***
Development of a generic fisheries information management system (FIMS) to store and process a diverse range of information and data requirements in support of the co-management of fisheries resources. Case studies in Bangladesh and Turks and Caicos were used to evaluate the success of the prototype FIMS. **Position:** Principle Investigator; **Client:** DFID; Collaborators: DoF Bangladesh, CNRS, CARE, DECR; **Location:** Bangladesh, Caribbean.
- 1998 - 2000 ***Selection Criteria and Co-Management Guidelines for Harvest Reserves in Tropical River Fisheries (R7043).*** Identification of ecological and institutional criteria for the selection and beneficial use of harvest reserves in tropical, artisanal river fisheries and the development of guidelines for their co-management in Indonesia. These guidelines were intended to deliver economic benefits to fishing communities near to reserves, and ecological benefits, including broodstock maintenance and recruitment enhancement to the protected fish stocks. **Position:** Senior Consultant; **Client:** DFID; Collaborators: CRIFI; **Location:** Indonesia.
- 1998 - 1999 ***Spatial Models for the Evaluation and Management of Inland Fisheries.*** Extending the work of *Synthesis of Simple Predictive Models for Tropical River Fisheries* (see below) this project developed empirical models of lake and river fisheries to predict (i) fishery potential under natural conditions, (ii) fishery potential under various types of enhancement and (iii) losses of potential due to environmental degradation. **Position:** Principle Investigator; **Client:** FAO; Collaborators: FAO; **Location:** London, Italy.
- Strategic Assessment of Tropical Coastal Fisheries Management (R7040).***
Evaluation of research methods and strategies for the implementation of

management advice in tropical coastal fisheries. The evaluation included a strategic review of assessment models and instruments from the perspective of large marine ecosystems (LMEs). Estimates of potential yield for major LMEs derived from the analysis of time series catch data using the generalised fishery development model were presented at the Fisheries Society of the British Isles Conference: 'Tropical Fish Biology' Symposium, Southampton, 1998. **Position:** Joint Project Manager; **Client:** DFID; **Location:** London.

- 1996-1999 ***The Performance of Customary Marine Tenure in the Management of Community Fishery Resources in Melanesia (R6436)***. Description and evaluation of the performance (measured in terms of social equity and resource sustainability) of customary marine tenure regimes in Fiji and Vanuatu. Statistical comparisons of indices of abundance/biomass, population parameters and species assemblages using PRIMER. **Position:** Senior Consultant; **Client:** DFID; Collaborators: University of the South Pacific, Fisheries Division Fiji Ministry of Primary Industries, Fisheries Department, Government of Vanuatu; **Location:** London, Fiji, Vanuatu.
- 1994 - 1997 ***Fisheries Dynamics of Modified Floodplains in Southern Asia (R5953)***. Examination of the impact of flood control structures on fish production potential and species assemblages in Bangladesh and India. The study included comparative assessments of production, spatial and seasonal patterns of growth, reproduction, survival and recruitment together with non-parametric multi-dimensional scaling to reveal changes to community structure. An age-structured dynamic pool model incorporating density-dependence in growth, mortality and recruitment was developed to explore management options for increasing sustainable yield including the manipulation of water levels, closed seasons and reserves. **Position:** Joint Project Manager; **Client:** DFID; Collaborators: Bangladesh Agricultural University, Patna University **Location:** Bangladesh, India, Indonesia.
- 1994 ***Assessment of Growth, Mortality and Population Dynamics of Salmon (*Salmo salar*) and Trout (*Salmo trutta*) within the River Annan, Scotland***. Application of length-based stock assessment techniques to estimate von Bertalanffy growth parameters and mortality rates within different locations and tributaries of the river to explore conservation measures to protect the stocks. **Position:** Consultant; **Location:** London.
- 1994 ***Analysis of Information Management and Collection within the Tristan da Cunha Lobster Fishery***. Design of information collection systems and logsheets for recording catch, effort and fleet dynamics. **Position:** Consultant; **Location:** London.
- 1993 - 1994 ***Synthesis of Simple Predictive Models for Tropical River Fisheries (R5030)***. Development of empirical models for predicting yield from tropical floodplain rivers in Asia and South America using morphological and hydrological explanatory variables. **Position:** Project Manager; **Client:** DFID; **Collaborators:** FAO; Location: London.
- 1993 ***Assessment and Management of the European Abalone***. Diving survey design and implementation to assess stock biomass, supported by length-based techniques and analytical dynamic pool models to provide guidelines for optimal exploitation and

management. **Position:** Project Manager; Collaborators: Guernsey Sea Fisheries Committee; **Location:** Plymouth, Guernsey.

1993 **UK Dependent Territories Exclusive Economic Zone Management Study.** Study of the offshore pelagic resources and potential fisheries in the exclusive fisheries zones of the U.K. Dependent Territories of the Caribbean to provide recommendations for optimising revenue-earning opportunities. **Position:** Consultant; **Client:** DFID; **Location:** London, Caribbean.

Publications:

Journal Articles:

- Welcomme, R.L., Cowx, I.G., Coates, D., Bene, C., Funge-Smith, S., Halls, A.S. & Lorenzen, K. (2010). Inland Capture Fisheries. *Phil. Trans. R. Soc. B.*, 365: 2881-2896.
- Arthur, R., Mees, C. & Halls, A.S. (2010). Assessing the impacts of fisheries management science: a review of DfID's Fisheries Management Science Programme. *Journal of Development Effectiveness* 2 (1): 158-172.
- Marie-Caroline Badjeck, M-C, Allison, E.H., Halls, A.S., Dulvy N.K. (2009). Impacts of climate variability and change on fishery-based livelihoods. *Marine Policy* doi:10.1016/j.marpol.2009.08.007
- Allison, E.H., Perry, L., Badjeck, M.C., Adger, N.W., Brown, K. Conway, D., Halls, A.S., Pilling, G.M., Reynolds, J.D., Andrew, N.L. & Dulvy, N.K. (2009). Vulnerability of national economies to the impacts of climate change on fisheries. *Fish and Fisheries* 10: 173-196.
<http://www3.interscience.wiley.com/journal/121681399/abstract>
- Halls, A.S., Payne, A.I., Alam, S.S. & Barman, S.K. (2008). Impacts of flood control schemes on inland fisheries in Bangladesh: guidelines for mitigation. *Hydrobiologia*, 69: 45-58.
- Halls, A.S. & Mustafa, M.G. & Dickson, M. (2007). An empirical bioeconomic stocking model for floodplain *beels* in Bangladesh. *Aquaculture Research* 38 (9), 947-952.
- Halls, A.S., Welcomme, R. L., & Burn, R.W. (2006). The relationship between multispecies catch and effort: Among fishery comparisons. *Fisheries Research*, 77: 78-83.
<http://www.sciencedirect.com/science/journal/01657836>
- Shankar, B., Halls, A.S., & Barr, J. (2005). The Effects of Surface Water Abstraction for Rice Irrigation on Floodplain Fish Production in Bangladesh. *International Journal of Water* 3: 61-68.
<http://www.inderscience.com/storage/f371116582912104.pdf>
- Halls, A.S. & Welcomme, R.L. (2004) Dynamics of river fish populations in response to hydrological conditions: A simulation study. *River Research and Applications*. 20: 985-1000.
<http://www3.interscience.wiley.com/cgi-bin/jissue/109857602>
- Shankar, B., Halls, A.S., & Barr, J. (2004). Rice versus fish revisited: on the integrated management of floodplain resources in Bangladesh. *Natural Resources Forum*, 28: 91-101.
- Craig, J.F., Halls, A.S., Barr, J., & Bean, C.W. (2004). The Bangladesh Floodplain Fisheries *Fisheries Research* 66: 271-286. <http://www.sciencedirect.com/science/journal/01657836>
- Hoggarth, D.D., Aeron-Thomas, M., Garaway, C., Koeshendrajana, S., Sarnita, A., & Halls, A.S. (2003). An integrated assessment of Indonesian river fishery reserves. *Indonesian Fisheries Research Journal (IFRJ)* 9 (1): 1-26.
- Halls, A.S., Kirkwood, G.P. & Payne, A.I. (2001). A dynamic pool model for floodplain-river fisheries. *Ecohydrology and Hydrobiology* , 1 (3): 323-339.
- Welcomme, R.L., & Halls, A.S. (2001). Some considerations of the effects of differences in flood patterns on fish populations. *Ecohydrology and Hydrobiology*, 1 (3): 313-321.
- Halls, A. S., Debnath, K., Kirkwood, G.P. & Payne, I. A. (2000). Density-dependent recruitment of *Puntius sophore*, in floodplain waterbodies in Bangladesh. *Journal of Fish Biology*, 56: 905-

914.

- Halls, A.S., Hoggarth, D.D. & Debnath, D. (1999). Impacts of hydraulic engineering on the dynamics and production potential of floodplain fish populations in Bangladesh. *Fisheries Management and Ecology* 6: 261-285.
- Hoggarth, D.D., Halls, A.S., Dam, R. K. & Debnath, K. (1999) Recruitment Sources for fish stocks inside a floodplain river impoundment in Bangladesh. *Fisheries Management and Ecology* 6: 287-310.
- Halls, A.S., Hoggarth, D.D. & Debnath, D. (1998) Impact of flood control schemes on river fish migrations and species assemblages in Bangladesh. *Journal of Fish Biology* 53 (Suppl. A), 358-380.
- Halls, A.S. & Azim, M.E. (1998). The utility of visible implant (VI) tags for marking tropical river fish. *Fisheries Management and Ecology* 5: 71-80.

Papers Submitted:

Papers in Preparation:

- Halls, A.S. et al. Deep pools as dry season fish habitat in the lower Mekong basin.
- Halls, A.S. Climate change impacts on floods and fisheries in the lower Mekong basin.
- Halls, A.S. and Paxton, B. Hydrological effects on fish biomass in the Tonle Sap-Great Lake System, Cambodia.
- Halls, A.S. & Kshatriya, M. Modelling the cumulative impacts of mainstream dams on migratory fish populations in the lower Mekong basin.
- Halls, A.S. & Kshatriya, M. Mekong fish guilds for basin-development impact assessment.
- Halls, A.S. & Mustafa, M.G. & Dickson, M. Does community-based fisheries management work? Experiences of the CBFM project in Bangladesh.
- Halls, A.S. & Mustafa, M.G. Empirical yield-effort models for inland fisheries of Bangladesh.
- Halls, A.S., Debnath, K., Kirkwood, G.P. and Payne, A.I. A cautionary note on the use of depletion estimates of population size.

Books and Chapters:

- Halls, A.S. (2001). Population Dynamics and Stock Assessment. In Welcomme, R.L. (ed) *Inland Fisheries: Ecology and Management*. Fishing News Books, Blackwell Scientific, Oxford, 358pp.
- Halls, A.S., Hoggarth, D.D. & Debnath, D. (2000) Impacts of hydraulic engineering on floodplain fish populations in Bangladesh: Implications for Management. In Cowx, I.G (ed.) *Management and Ecology of River Fisheries*, pp 201-217, Fishing News Books, Oxford.

Conference Proceedings:

- Arthington, A. H.; Baran, E.; Brown, C. A.; Dugan, P.; Halls, A. S.; King, J. M.; Minte-Vera, C. V.; Tharme, R. E.; Welcomme, R. L. (2007). *Water requirements of floodplain rivers and fisheries: existing decision support tools and pathways for development*. Colombo, Sri Lanka: International Water Management Institute. 74 pp. (Comprehensive Assessment of Water Management in Agriculture Research Report 17).
http://www.iwmi.cgiar.org/assessment/files_new/publications/CA%20Research%20Reports/CARR17.pdf.
- Arthur, R., A. Halls and C. Mees (2006). *Impact of fisheries management science: Experience from DFID's Fisheries Management Science Programme*. Paper 235 IIFET Conference Proceedings, IIFET, Portsmouth, July 2006.
- Badjeck, M-C., W.N. Adger, E.H. Allison, K.Brown, D. Conway, N. Dulvy, A. S. Halls, A. Perry and J.D.

- Reynolds (2005). *Climate change impacts on fish stocks and fisheries: vulnerability and adaptation of fisherfolk*. Proceedings of the Climate Change & Aquatic Systems Conference, July 21-23 2004, University of Plymouth, UK.
- Arthington, A.H., Lorenzen, K., Pusey B.J., Abell R., Halls, A.S., Winemiller K.O., Arrington D.A. & Baran E. (2004). *River fisheries: ecological basis for management and conservation*. In: Welcomme, R.L. & Petr, T. (Ed.) Proceedings of the 2nd International Symposium on the Management of Large Rivers for Fisheries. Vol 1, pp. 31-60. Bangkok: FAO.
<http://www.fao.org/docrep/007/ad525e/ad525e05.htm#bm05>
- Welcomme, R.L. & Halls, A.S. (2004). *Dependence of Tropical River Fisheries on Flow*. In: Welcomme, R.L. & Petr, T. (Ed.) Proceedings of the 2nd International Symposium on the Management of Large Rivers for Fisheries. Vol 2, pp. 267-284. Bangkok: FAO.
<http://www.fao.org/docrep/007/ad525e/ad525e05.htm#bm05>
- Shankar, B., Halls, A.S., Barr, J. & Rahman, M. (2002). *Management strategies to improve Floodplain livelihoods in Bangladesh: Some modelling results*. Proceedings of the Wetlands Conference, IUCN, Bangladesh, July 2002.

FAO Technical Papers:

- Halls, A.S. and Paxton, B. (2010). *The Stationary Trawl (Dai) Fishery of the Tonle Sap-Great Lake System, Cambodia*. In The State of World Fisheries and Aquaculture, 2009. FAO Fisheries and Aquaculture Department, Food and Agriculture Organization of The United Nations, Rome, 2010.
- Hoggarth, D.D., Abeyasekera, S., Arthur, R., Beddington, J.R., Burn, R.W., Halls, A.S., Kirkwood, G.P., McAllister, M., Medley, P., Mees, C.C., Parkes, G.B., Pilling, G.M., Wakeford, R.C., and Welcomme, R.L. (2006). Stock Assessment for Fishery Management – A Framework Guide to the use of the FMSP Fish Stock Assessment Tools. *FAO Fisheries Technical Paper*. No. 487. Rome, FAO, 259 pp., CD-ROM.
- Halls, A. S., Arthur, R., Bartley, D., Felsing, M., Grainger, R., Hartmann, W., Lamberts, D., Purvis, J; Sultana, P., Thompson, P., Walmsley, S. (2005). Guidelines for Designing Data Collection and Sharing Systems for Co-Managed Fisheries. Part I & 2: *FAO Fisheries Technical Paper*. No. 494/1&2. Rome, FAO. 2005. 42p and 108pp.
<ftp://ftp.fao.org/docrep/fao/008/a0230e/a0230e00.pdf> and
<ftp://ftp.fao.org/docrep/fao/008/a0231e/a0231e00.pdf>
- Hoggarth, D.D., Cowan, V.J., Halls, A.S., Aeron-Thomas, M., McGregor, A.J., Garaway, C.A., Payne, A.I. & Welcomme, R.L. (1999). Management Guidelines for Asian Floodplain River Fisheries. *FAO Fisheries Technical Paper*, No. 384/1&2 FAO, Rome 63pp & 117pp.
<ftp://ftp.fao.org/docrep/fao/006/x1357e/x1357e00.pdf> and
<ftp://ftp.fao.org/docrep/fao/006/x1358e/x1358e00.pdf>

MRC Technical Papers:

- Halls, A.S. et al (in prep.). An integrated analysis of data from fisheries monitoring programmes in the lower Mekong basin. *MRC Technical Paper* No. XX, Mekong River Commission, Vientiane, XXpp. ISSN: XXXX-XXXX.
- Halls, A.S. et al (in press). Deep pools as dry season fish habitat in the lower Mekong basin – a quantitative assessment. *MRC Technical Paper* No. XX, Mekong River Commission, Vientiane, XXpp. ISSN: XXXX-XXXX.
- Halls, A.S.; Paxton, B.R.; Hall, N.; Pengbun, N.; Lieng, S. and Pengby, N. (in press). The Stationary Trawl (Dai) Fishery of the Tonle Sap-Great Lake, Cambodia. *MRC Technical Paper* No. XX, Mekong River Commission, Vientiane, XXpp. ISSN: XXXX-XXXX.

- Halls, A.S. & Kshatriya, M. (2009). Modelling the cumulative impacts of mainstream dams on migratory fish populations in the lower Mekong basin. *MRC Technical Paper No. 25*. Vientiane, Mekong River Commission. 104 pp.
- Halls, A.S., Conlan, I., Wisesjindawat, W., Phouthavongs, K., Viravong, S., Sokheng, C., Vu, V.A. (in press). Atlas of deep pools of the lower Mekong River. *MRC Technical Paper No. XX*. Vientiane, Mekong River Commission.

Newsletters and Policy Briefs:

- Halls, A.S. (2009). Addressing fisheries in the Climate Change and Adaptation Initiative. *Catch & Culture*, 15 (1).
- Barlow, C, Baran, E., Halls, A.S. and Kshatriya, M. (2008). How much of the Mekong fish catch is at risk from mainstream dam development. *Catch & Culture* 14 (3): 16-21.
- Halls, A.S. Deep pool mapping and research. (2008). *Catch & Culture* 14 (2).
- Halls, A.S., Sopha, L., Ngor, P. & Phalla, T. (2008). New research reveals ecological insights into dai fishery. *Catch & Culture* 14 (1).
- Halls, A.S. (2008). Monitoring fish abundance and diversity in the Mekong Basin. *Catch & Culture* 14 (1): 24-25.
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- Halls, A.S. & Walmsley, S. (2006). Addressing challenges in co-management information systems. *Id21Natural Resources*.
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- Halls, A.S., Mustafa, M.G. & Rab, M.A. (2005). Testing Guidelines for Designing Data Collection Systems for Co-Managed Fisheries. *Community-Based Fisheries Management News*, Dhaka, WorldFish Centre, Issue 5, August 2005.
- Shankar, B., Halls, A.S., & Barr, J. (2003). Rice versus fish revisited: on the integrated management of floodplain resources in Bangladesh. *Natural Resource Perspectives*, DFID.
- Pilling, G. & Halls, A.S. (2003) Age-or length-based population parameter estimation techniques: What drives the choice? *NAGA* 26 (2).
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http://www.worldfishcenter.org/naga/Naga26-2/pdf/naga_26no2_feature1.pdf
- Hoggarth, D.D. & Halls, A.S. (1997). Restocking the floodplains from natural sources. *Aquaculture News* 23, 25-27.

PowerPoint Training Aids and Online Publications:

- Halls, A.S. (2005). Modelling Floodplain River Fisheries: An Introduction.
http://www.fmsp.org.uk/Documents/r8486/r8486_5.ppt
- Halls et al (2005). Improving fish catches inside flood control schemes
http://www.fmsp.org.uk/Documents/r8486/r8486_12.pdf
- Halls, A.S. (2005). Flood control impacts on fisheries: Guidelines for mitigation.
http://www.fmsp.org.uk/Documents/r8486/r8486_4.ppt

Conference Presentations:

- 2007 Towards a model to predict the response of fish resources to development in the lower

- Mekong basin. 8th Asian Fisheries Forum, 20 - 23 November 2007, Kochi, India.
- 2006 *Impacts of flood control schemes on inland fisheries in Bangladesh: Guidelines for mitigation.* FAO EIFAC Symposium, Mondsee, Austria, 13-17 June 2006.
- 2005 *Impacts of Climate Change on Fisheries.* Climate Change, Fisheries and Poverty Reduction, DFID Headquarters, London, 12th September 2005.
- 2003 *Modelling River Fisheries.* The Second Large Rivers Symposium, Phnom Penh, Cambodia, February 2003.
- 1998 *Impact of flood control schemes on river fish migrations and species assemblages in Bangladesh.* Fisheries Society of the British Isles Conference: Tropical Fish Biology, Southampton, UK.
- 1998 *Impacts of hydraulic engineering on floodplain fish populations in Bangladesh: Implications for Management.* Hull International Fisheries Institute Symposium: Management and Ecology of River Fisheries, Hull, UK.

Recognition:

- 2009 Invited co-author of the UK Government's Foresight Review: Inland Fisheries Drivers Review.
- 2009 Invited contributor for the FAO *The State of World Fisheries and Aquaculture* 2009 report.
- 2008 Invited member of the FAO Expert Meeting on Climate Change Implications for Fisheries and Aquaculture, FAO Headquarters, April 7-9, 2008.
- 2008 Invited member of the FAO Expert Meeting on Climate Change, Water and Food Security at FAO Headquarters, 26-28 February 2008.
- 2005 Invited speaker at the Climate Change, Fisheries and Poverty Reduction Workshop, DFID Headquarters, London, 12th September 2005.
- 2004 Invited Member of the Lake Victoria Expert Panel Meeting, MRAG, London, November 2004.
- 2004 Invited speaker at the Ecosystem Approaches to Management Conference, WorldFish Centre, January, 2004.
- 2004 Invited speaker for the INTECOL Wetlands Conference, Utrecht, July 2004.
- 2003 Technical advisor in support of the Water Challenge Programme (ICLARM), Phnom Penh, February 2003.
- 2003 River Ecology and Biodiversity Expert Panel Member for the Large Rivers Symposium, Phnom Penh, Cambodia, February 2003.
- 2001 Advisor and project reviewer for the DFID-funded SUFER Project, Bangladesh.
- 2001 Member of the Southern Asian Working Group at the International Workshop on Management of Tropical Coastal Fisheries in Asia, ICLARM, Malaysia.
Invited participant: Hull International Fisheries Institute Symposium Expert Panel Workshop: *Management and Ecology of River Fisheries*, Hull, UK.
- 1998- Reviewer for the following international journals:
Journal of Fish Biology
Fisheries Research
Fisheries Management and Ecology
Ecohydrology & Hydrobiology
Environmental Biology of Fishes

Training Courses:

- ISEB Certificate in Data Modelling (October 2003).
- Introduction to Bayesian Estimation Techniques and Software, Imperial College (August 2003).
- Writing Project Proposals (November 2002).

- MS Access & MS Word (Wise Owl Training, August/October 2002).

Memberships:

- Fisheries Society of the British Isles (FSBI) since 2004
- WWF since 2002.
- Marine Conservation Society since 2001.