Annex 2 – Logframe for Sustainable Management of Ornamental Fish Species in Mamiraua, June 2005.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: **To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve** • **the conservation of biological diversity,** • **the sustainable use of its components, and** • **the fair and equitable sharing of benefits arising out of the utilisation of genetic resources**			
Purpose Populations of ornamental fish species in MSDR protected through management within a sustainable ornamental fishery, made possible through strengthened capacity of fishers, local community, researchers, reserve managers and national and international traders.	Ornamental fish populations in MSDR remain at natural levels whilst accommodating controlled sustainable extraction of selected fish species by May 2008. Two Organised Community Associations have demonstrated capacity to implement and manage the sustainable extraction of ornamental fish from within MSDR by May 2008. Best Practice Guidelines adopted by all links in the supply chain from MSDR to retailer by May 2008 to ensure the sustainable trade in ornamental fish.	Annual stock estimates from field survey reports and monitoring activities demonstrate natural sustainable ornamental fish populations in the MSDR commencing May 2006. Collection Area Management Plan (CAMP) in operation and information disseminated by June 2008. Community Associations document registered at Cartorio (central registry) by May 2008. Monitoring reports on the adoption of best practice guidelines by the supply chain by May 2008. Best practice guidelines for the sustainable trade in ornamental fish from the MSDR produced and disseminated by May 2008.	There is a market for sustainably sourced ornamental fish which is not overshadowed by improvements in captive breeding techniques or other market influences. Cooperation between stakeholders in freshwater ornamental fish trade is in existence and can be built upon.
Outputs 1. Biodiversity of ornamental fish species in MSDR assessed, and a standardised, repeatable monitoring programme established. [Populations of ornamental fish in the MSDR are maintained at a natural level.]	1.1 MSDR ornamental fish population surveyed to document species present and population abundance within the designated fishing zones. The results written up and disseminated by May 2006.	1.1.1 (T4) Biological survey protocol approved by August 05. 1.1.2 (T13): Baseline fish surveys of the designated fishing zones completed and written up by June 06. 1.1.3 (T19): Results of the baseline biological surveys presented to the communities by June 06.	Standardised survey techniques and methodologies adhered to so that valid analyses and modelling can be carried out.

	1.2 Ornamental fish stock monitoring protocol completed by August 06 for the Collection Area but which may be applied in a wider Amazon context. 1.3 Collection Area Management Plan (CAMP) for ornamental fish extraction completed by April 2008 to ensure its sustainable management. 1.4 At least four biologists trained in scientific survey techniques to assess and monitor fish populations through three training courses run by Head Scientist on an annual basis commencing August 05.	1.2.1 (T8): Fish species that are ecologically and economically suitable for extraction at a sustainable level listed by May 06. Appropriate extraction methods agreed and described. 1.2.2 (T20): Biological monitoring protocol agreed and adopted by August 06. 1.3.1 (T31): CAMP content list drafted and agreed by December 2005. 1.3.2 (T6): Supporting information for CAMP collected by project team by May 2006. 1.3.3 (T27): Draft CAMP[i] completed and peer-review comments incorporated by June 07. 1.4.1 (T29): Biological survey team trained to follow Collection Area monitoring protocol in June 2006 to commence survey work in July 2006. 1.4.2 (T31): First annual Collection Area monitoring completed and written up by May 2007. 1.4.3 (T36): This is to be repeated annually *ad finitum*. 1.4.3 (T11): Biological survey team trained in survey techniques by HS July 2005, 2006 and 2007.	
2. Social and economic parameters of community determined and monitored, local knowledge and needs identified, and feedback loop established. [Increase livelihood opportunities from extraction of sustainable levels of ornamental fish lead to increased income for households in MSDR].	2.1 Households that have elected to be involved in the project benefit from an increased income of 10% due to the new fishery by 2008.	2.1.1 (T5): Socioeconomic survey protocol agreed by September 05. 2.1.2 (T7): Communities and individuals to be involved in the project determined and agreed by December 2005. 2.1.3 (T14): Baseline socio-economic surveys of identified MSDM communities and fishers completed by May 2006.	Willingness of community to participate in survey and embrace project principles. Sufficient information available to assess socio-economic parameters accurately.

	2.2 Two Community Associations have the organisational capacity to effectively manage and monitor a sustainable trade in ornamental fish in MSDR by May 2008.	2.1.4 (T21): Socio-economic monitoring protocol agreed by August 2006 that will include indicators to measure the socio-economic impact of the trade in ornamental fish on the communities. 2.2.1 (T12): Socio-economic survey team including community promoters trained in survey protocol by October 2005. 2.2.2 (T19): Results of the baseline socio-economic surveys presented to the communities by June 06. 2.2.3 (T22): Through a process of consultation, communities endorse Best Practice Guidelines[ii] by September 2006. 2.2.4 (T26): Fishers trained in Best Practice Guidelines to be independently assessed as competent by May 2008. 2.2.5 (T24): Community organisations formed, officially registered and membership protocols agreed by September 2007. 2.2.6 (T25): Training of designated personnel from community associations in business management, accounting reporting etc. to ensure that they are verified as competent by May 2008.	
3. Market and economic potential for fishery identified, a business plan and standardised guidelines in place for trading procedure from source to end-user.	3.1 A sustainable trade in ornamental fish is established from the MSDR by May 2008.	3.1.1 (T1): Industry analysis undertaken on UK and European fish trade with particular reference to Brazilian ornamental fish. Report produced by December 2005. 3.1.2 (T9): Industry analysis undertaken on Brazilian fish trade with particular reference to fish exported from Manaus, Brazil, by December 2005 to include current trade pathways/systems.	Communication between all links of trade chain and willingness to document trade movements. Standardised monitoring techniques maintained. Relevant stakeholders willing and able to participate in training. Continuity for trained staff and their willingness to disseminate training methods to others.

	3.2 Standardised Best Practice Guidelines are adopted by May 2008 for the sustainable trade in ornamental fish from MSDR that are transferable and can be applied in a wider Amazonian context.	3.1.3 (T10): Current and where possible future trade regulations identified by April 2006 to include taxes, custom requirements, health and welfare procedures in Brazil, UK, Europe, Japan and US. 3.1.4 (T15): Business plan drafted and reviewed by project team by June 2006 to include scenarios to advise selection of fish species list. T30: Business plan to be reviewed annually. 3.1.5 (T28): Implementation of ornamental fish business plan by May 2008. 3.2.1 (T2): Existing natural resource certification/guidelines are assessed and potential applicability determined by December 2005. 3.2.2 (T32) Produce and peer review standardised Best Practice Guidelines for the sustainable trade in ornamental fish. Draft by June 2006 and Final June 2007. 3.2.3 (T40): Peer review standardised Best Practice Guidelines are adopted by fishers, managers, communities, traders, exporters, importers and retailers by May 2008 3.2.4(T23): Procedures for trade documentation, verification of compliance to standards, auditing and feedback procedures developed and implemented by May 2008.	
4. Fish welfare maintained from source to end user	4.1 Ornamental fish welfare secured by achieving 80% reduced mortality alongteh supply chain from 2008.	4.1.1 (T42). Recommendations for improved welfare by May 2006. Water quality parameter standards within defined optimum values achieved on 90% of shipments by May 2008. 4.1.2 (T32) Best practice guidelines produced for animal welfare from capture	Each component of the chain unwilling to implement best practice. Each component of chain requires training to implement best practise Upon understanding that welfare improvements will benefit their livelihood, communities and exporters will actively seek to

		to consumer by May 2007. 4.1.3 (T40) Communities, exporters and importers implementing Fish Welfare Best Practice guidelines by May 2008	implement changes and maintain best practise. Improvements can be made with realistic modifications to shipping methods. Improvements can be made that do not require extensive capital investment and that once capital investments are made, they will continue to provide benefit without significant re-investment.
Standards for sustainable harvesting upheld within reserve. [This is included in Outputs 1 and 3]			
Understanding of, support for, and participation in sustainable ornamental fishery within community. [This output is included in Output 2]			

Activities	**Activity Milestones (Summary of Project Implementation Timetable)**
Research and monitoring programme	Within year 1: Undertake population survey of ornamental fish species. Socio-economic survey of local community. Collect information required for CAMP. Assessment on Brazilian and international trade and market perspectives. Within year 2: Establish monitoring system protocols for biological and socio-economic work. First biological monitoring survey and trial collection season. Produce working business plan. Within year 3: Put in place pilot system for evaluating and monitoring off-take and socio-economic indicators. Data organised, maintained and available in accessible forms. Fisher organisations with increased capacity to coordinate business and carry out practicalities of trade. Produce working guidelines for trade.
Workshops, meetings and training	Within year 1: Hold introductory and information-gathering meetings. Biological and socio-economic methodology training. Community interviews. Brazilian trade analysis meetings and workshop. Methodology review and annual review meetings. Within year 2: Hold fishers meetings to discuss collection scheme planning. Hold community training on business, collection, handling and transportation techniques. Trade meetings to discuss business plan, CAMP and trade procedures. Refresher biological and socio-economic methodology training. Methodology review and annual review meetings. Within year 3: Hold fisher training sessions for business and collection procedures. Trade workshop to present and discuss CAMP and trade guidelines documents to stakeholders.
Production of material	Within year 1: Biological survey report. Database. Semi-annual and annual report. Within year 2: Socio-economic survey report. Biological and socio-economic monitoring results and monitoring protocol reports. Stakeholder agreements. Drafted business plan and CAMP. Semi-annual and annual report. Within year 3: Guidelines for trade. Business plan and CAMP. Training manual. Summary of project. Semi-annual and final report.

[i] CAMP to include: geographical, ownership and political boundaries of collection area, identification of all stakeholders, collection and fishing history, species for collection, catch quotas, monitoring protocol to include reporting of destructive or over fishing practices or list of significant organisms not to be touched and procedures in place to prevent this.

[ii] Standardised guidelines are to include: ecosystem management which comprises the Collection Area Management Plan; collection methods, handling and storage; logistics and transportation from source to retailer which included husbandry and fish welfare; administrative and accounting procedures. To be defined further.