

BRAZIL INLAND FISHERIES

Sustainable Livelihoods and Conservation

CIDA Project A-020911

**SEMI-ANNUAL NARRATIVE PROGRESS REPORT VI
FOR THE PERIOD October 1, 2005 – March 31, 2006**

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Table of Contents

ABBREVIATIONS AND TERMS.....	4
ABBREVIATIONS AND TERMS.....	4
EXECUTIVE SUMMARY.....	7
SUMMARY OF ACTIVITIES	9
ACTIVITIES FOR SUB-PROJECT 1 – PREPARING COMMUNITIES FOR.....	9
CO-MANAGEMENT.....	9
Activity 1.1.4 - Identify and resolve user group conflicts.....	9
Activity 1.2.1 - Transfer of an Amazon experience to the São Francisco River (IARA)	9
Activity 1.2.3 - UFSCar monitoring program.....	10
Activity 1.3.1 - Community policing.....	11
Outputs for Sub-Project 1 on Preparing Communities for Co-management:.....	11
Outcomes for Sub-project 1 on Preparing Communities for Co-management:.....	12
ACTIVITIES FOR SUB-PROJECT 2 - BUILDING SUSTAINABLE COMMUNITIES	13
Activities 2.1.2 and 2.1.3 - Technical training to evaluate and improve livelihood and community options.....	13
Activity 2.2.1- Canadian social scientist in Brazil.....	13
Activity 2.2.4 - Foster NGO networks.....	13
Activity 2.3.3 - Value-added development in Brazil.....	14
Activity 2.3.5 - Participatory review of alternate activities	14
Outputs for Sub-Project 2 on Building Sustainable Communities:	15
Outcomes for Sub-project 2 on Building Sustainable Communities:.....	16
ACTIVITIES FOR SUB-PROJECT 3 – SECURING THE FISHERIES RESOURCE.....	16
Activity 3.2.2 - Radiotelemetry assistance in Brazil.....	16
Activity 3.3.2 - Assistance for implementing stock assessment options	16
Activity 3.3.4 - Evaluation workshops.....	17
Activity 3.4.1 – Reducing industry impact.....	18
Activity 3.4.3 – Canadian assistance to implement solutions to environmental problems.....	18
Outputs for Sub-Project 3 on Securing the Fisheries Resource:	21
Outcomes for Sub-Project 3 on Securing the Fisheries Resource:	22
ACTIVITIES FOR CROSS-CUTTING THEME A – ASSIST THE DEVELOPMENT OF POLICIES FOR SUSTAINABLE FISHERIES WITH COMMUNITY PARTICIPATION	22
Activity A.3 - Participation in conferences and events	22
Outputs for Theme A on Policies for Sustainable Fisheries with Community Participation.....	23
ACTIVITIES FOR CROSS-CUTTING THEME B – PUBLIC AWARENESS AND EDUCATION.....	23
Activity B.2.4 – Contribute to local press on fisheries issues	24
Activity B.2.5 – Evaluate educational goals	25
Outputs for Theme B on Public Awareness and Education:	26
Outcomes for Theme B on Public Awareness and Education:.....	26
ACTIVITIES FOR CROSS-CUTTING THEME C – CREATING OPPORTUNITIES FOR WOMEN, YOUTH AND FAMILY	26
Activity C.1 – Workshop component on women's needs	26

<i>Activity C.3 – Youth workshop identifying needs and strategies, ongoing implementation of activities with pilot youth groups.....</i>	<i>27</i>
<i>Outputs for Theme C on Creating Opportunities for Women, Youth and Family:</i>	<i>28</i>
<i>Outcomes for Theme C on Creating Opportunities for Women, Youth and Family</i>	<i>29</i>
MANAGEMENT ACTIVITIES COMPLETED	29
<i>Activity D.1 - Project Website.....</i>	<i>29</i>
<i>Activity D.2 - Project newsletter.....</i>	<i>29</i>
<i>Activity D.3 - Creation of other publicity material.....</i>	<i>29</i>
<i>Activity E.1 - Project organization meetings</i>	<i>30</i>
<i>Activity E.3 – On-going project management</i>	<i>31</i>
<i>Outputs for Communications and Management:</i>	<i>32</i>
<i>Outcomes for Communications and Management:.....</i>	<i>32</i>
PROJECT SPIN-OFFS.....	33
VARIANCE OF ACTIVITIES PLANNED VS. CARRIED OUT	33
VARIANCE OF EXPENDITURE FORECASTED VS. ACTUAL	34
PROBLEMS AND CHALLENGES	34
REPORT ON GENDER EQUITY STRATEGY	34
KEY LESSONS LEARNED DURING REPORTING PERIOD.....	35
AREAS REQUIRING CIDA ACTION OR APPROVAL IN NEAR FUTURE.....	35
PLANNED MISSIONS TO AND FROM BRAZIL	35
 APPENDIX A – RESULTS AND INDICATORS FOR ACTIVITIES CONDUCTED DURING THE REPORTING PERIOD	
APPENDIX B – SCHEDULE OF ACTIVITIES FOR NEXT REPORTING PERIOD	
APPENDIX C – SUB-PROJECT 1 RESULTS	
APPENDIX D – SUB-PROJECT 2 RESULTS	
APPENDIX E – SUB-PROJECT 3 RESULTS	
APPENDIX F – CROSS-CUTTING THEME RESULTS	
APPENDIX G – MANAGEMENT AND SPIN-OFF RESULTS	

Abbreviations and Terms

ADETRES	<i>Agência de Desenvolvimento Econômico e Social de Três Marias e Região</i> – Economic and Social Development agency for Três Marias and region.
<i>Agente Jovem</i>	Federally-funded municipal scholarship program to keep at-risk youth in school and promote community service
AMMESF	<i>Associação dos Municípios do Médio São Francisco</i> - Association of Municipalities of the mid-São Francisco River
ANAMMA	<i>Associação Nacional de Órgãos Municipais de Meio Ambiente</i> – National Association of Municipal Institutions for the Environment
BC	British Columbia, Canada
<i>Beija Flor</i>	"Hummingbird" - An environmental education program by SAAE-Pirapora, in partnership with MESFA and geography students from Unimontes
BG	<i>Barra do Guaicuí</i> , a sub-municipality of Varzea de Palma at the mouth of the Rio das Velhas with the SF
<i>Buriti</i>	Palm tree characteristic of the <i>veredas</i> ecosystem
BZ	Buritzeiro, large rural municipality across the river from Pirapora
CAP	<i>Centro de Apoio ao Pescador</i> , Centre of Assistance for the Fishermen and women in TM, now renamed <i>Parque Municipal do Pira</i> - Municipal Park of the Pira
CAPES	<i>Coordenação de Aperfeiçoamento de Pessoal de Nível Superior</i> - Coordination of Improvement for Trained People, a federal program for special training of scientists and university students
CBHSF4	<i>Comitê de Bacia Hidrográfica do São Francisco -sub- Bacia 4-</i> Basin Committee of the São Francisco River Watershed - Sub-basin 4
CEMIG	<i>Companhia Energética de Minas Gerais</i> - state-run hydroelectric company
<i>cerrado</i>	Tropical grassland savannah typical of central Brazil, considered endangered
CETEC	<i>Fundação Centro Tecnológico de Minas Gerais</i> , a private technological research station of Minas Gerais, located in Belo Horizonte
CIDA	Canadian International Development Agency
CIEA	<i>Comissão Interinstitucional de Educação Ambiental</i> - Federal Inter-Institutional Commission of Environmental Education
CNPq	<i>Conselho Nacional de Pesquisa</i> - National Research Council of Brazil
CODEVASF	<i>Companhia de Desenvolvimento dos Vales do São Francisco e do Parnaíba</i> - Company for Development of the São Francisco and Parnaíba Valleys
<i>Coleta seletiva</i>	Selective garbage collection, referring to solid waste management based on sorting garbage at source
COLMEIA	<i>Conselho Local de Meio Ambiente</i> , a local council for the environment - federal program
<i>colônias</i>	Primary institutional structure for professional fishermen in Brazil
COMLAGO	<i>Consórcio dos Municípios do Entorno do Lago de Três Marias</i> , a consortium of municipalities on the Três Marias reservoir
CONFEA de MG	<i>Comissão Coordenadora do Fórum Permanente de Educação Ambiental de Minas Gerais</i> – Commission Coordinating a Permanent Forum on Environmental Education in MG
COPASA	<i>Companhia de Saneamento de Minas Gerais</i> - Sanitation Company of MG
CPT	<i>Comissão Pastoral de Terra</i> , a Roman Catholic NGO in Brazil dealing with agrarian reform
DFO	Department of Fisheries and Oceans, Canada
DNA	deoxyribonucleic acid - the molecule determining the genetic code of living organisms
EE	environmental education
EMATER	<i>Empresa de Assistência Técnica e Extensão Rural do Estado de Minas Gerais</i> - a public agency of the Secretary of Agriculture of Minas Gerais for extension and development services
EMBRAPA	<i>Empresa Brasileira de Pesquisa Agropecuária</i> - Federal Government company of agricultural research; also deals with fisheries management in the Pantanal
ESEC	<i>Estação Ecológica de Pirapitinga</i> - Ecological Station in Pirapitinga, established by CEMIG
FASFRAN	<i>Fundação São Francisco</i> - municipal foundation in Três Marias responsible for CAP

<i>Fazendas</i>	Farms
FEAM	<i>Fundação Estadual do Meio Ambiente</i> - State Environment Agency in Minas Gerais
<i>Federação</i>	See FEPESCA-MG
FEPESCA-MG	<i>Federação de Pescadores Artesanais de MG</i> - Federation of Professional Artisanal Fishermen and Fisherwomen of Minas Gerais
FUNED	<i>Fundação Ezequiel Dias</i>
GRAAL	International network of women founded in Holland concerned with empowerment and self-support; an active chapter in Buritizeiro focusing on conservation and income-generation
GTPesca	<i>Grupo de Trabalho da Pesca</i> – The IDRC Rumo project established this multi-stakeholder working group that brings together <i>colônias</i> , Federação, PMMG, IBAMA and IEF for dialogue about fisheries management.
IARA	<i>Instituto Amazonica de Manejo Sustentável dos Recursos Ambientais</i> , an Amazonian NGO working with community-based resource management
IBAMA	<i>Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis</i> - Brazilian Institute for the Environment and Natural Resources
IDRC	International Development Research Centre (Canada)
IEF	<i>Instituto Estadual de Florestas</i> - State Forestry Institute of Minas Gerais
IIEGA	<i>International Institute of Ecology and Environmental Management</i>
IGAM	<i>Instituto de Gestão de Aguas Mineira</i> - Water Management Institute of Minas Gerais
Integrated environmental education	Activities that are either integrated across the curricula in the school, or linked to other out-of-school programs in the community. Ideally, programs meet both criteria.
LBGqA	Laboratory of Biogeochemistry, Federal University of São Carlos
<i>Lixo e Cidadania</i>	Garbage and Citizenship, a UNICEF program in Brazil
<i>mananciais</i>	Water sources, referring to a river's or stream's starting point
<i>Mata</i>	Forest
MEC	<i>Ministério de Educação</i> - Federal Education Ministry in Brazil
MESFA	Movimento Ecológico São Francisco de Assis, environmental NGO in São Francisco Valley
<i>Minha Caderneta de Pesca</i>	<i>My Fishing Notebook</i> distributed by the PNDPA for youthful sports fishers
<i>Ministerio Público</i>	An autonomous organ responsible for upholding Brazilian law, especially as it relates to collective rights (for example, environmental protection, minority rights, etc.)
MMA	<i>Ministerio do Meio Ambiente</i> - Federal Environment Ministry in Brazil
<i>nascente</i>	Spring, referring to a place where water flows naturally from the ground
NGO	Non-governmental organization
NUPELIA	<i>Núcleo de Pesquisa em Limnologia, Ictiologia, e Aqüicultura</i> , a research centre in the State University of Maringá [UEM], Paraná state
<i>passeatas</i>	Recreational walks or nature tours
<i>Pescador das Notícias</i>	<i>Fisherman of the News</i> – Ibiai community reporters run this radio program to present news and interviews from the fishing <i>colônias</i> and the community in general.
Petrobras	<i>Petróleo Brasileiro SA</i> - principal petroleum company in Brazil, state-owned
<i>piracema</i>	Migration that some Brazilian fish species undergo to spawn. Generally occurs in large schools and upstream, in Minas Gerais between October and January. Fishing is restricted during this period and commercial fishermen receive an unemployment compensation.
PMMG	<i>Polícia Militar de Minas Gerais</i> - state military police in Minas Gerais
PMTM	<i>Prefeitura Municipal de Três Marias</i> - Três Marias City Hall
PNDPA	<i>Programa Nacional de Desenvolvimento de Pesca Amadora</i> - National Program for Development of Sport Fisheries
PPA	<i>Peixes, Pessoas e Água</i> - Fish, People, and Water - local name given to the CIDA project
<i>Programa Semeando</i>	Sowing Program, part of the National Service for Rural Learning Apprenticeships - a partnership between the federal government and UNESCO
<i>Projeto Chuva</i>	Project Rain, offered by COPASA

<i>Projeto Manuelzão</i>	<i>Manuelzão Project</i> , an NGO activity of the UFMG Medical School for restoration of the Rio das Velhas watershed
<i>Projeto Renascer</i>	Project Re-birth - a program by the Federal Secretariat of Social Development and Citizenship, present in Pirapora
<i>Projeto Vereda: Mãe das Águas</i>	Vereda Project: Mother of Waters - a proposal to MMA by FEPE-MG with a variety of partners in Três Marias
PUC – Minas	<i>Pontifícia Universidade Católica de Minas Gerais</i> - Catholic University of Minas Gerais
Rede Cooperação	<i>Cooperation Network</i> - Multi-stakeholder environmental monitoring group created in September 2005 in response to the surubim fish mortality
Rio SF	São Francisco river
Rumo	IDRC funded project (2002-2005) managed by UFSCar that works toward co-management of fisheries in the São Francisco River in Minas Gerais
RMEA	<i>Rede Mineira de Educação Ambiental</i> - Network for Environmental Education of Minas Gerais
SAAE	<i>Serviço Autônomo de Água e Esgoto</i> - Autonomous Service of Water and Sewer (water and sewage utility provider in Pirapora)
Sala Verde	Green Room, an MMA program to make environmental literature available throughout the country for education. Present in Três Marias and Pirapora.
SAMARA	NGO of Andrequicé, Três Marias, concerned with cultural conservation
SEAP	<i>Secretaria de Aquicultura e Pesca</i> , a federal agency responsible for aquaculture and fisheries development in Brazil
SEBRAE	<i>Serviço Brasileiro de Apoio às Micro e Pequenas Empresas</i> , a Brazilian federal support and development agency for micro and small business
SEMAD	<i>Secretaria de Estado do Meio Ambiente e Desenvolvimento Sustentável</i> - Environment Secretary of Minas Gerais
SEMEC SEMEIA	<i>Três Marias Secretariat of Education</i> <i>Secretaria Municipal de Meio Ambiente</i> - Secretariat of Environment for the Municipality of Três Marias
SESAU	<i>Secretaria Municipal de Saude</i> – Três Marias Secretariat of Health
SETUR	<i>Secretaria Municipal de Turismo, Esporte e Lazer (Beira Rio)</i> , São Gonçalo do Abaete - São Gonçalo do Abaeté Secretariat of Tourism, Sport and Recreation
SGA	<i>São Gonçalo do Abaeté</i> – municipality across the river from Três Marias
SISEMA	<i>Sistema Estadual de Meio Ambiente</i> , consisting of IEF, FEAM and IGAM
Sítio	Small hobby farm
Sucato	<i>Superintendência do Trabalho Artesanal nas Comunidades</i> - Superintendent of Artisanal Work in Communities, a State program
surubim	A large catfish species native to Brazil and important to commercial fishing
TM	Três Marias
UBC	University of British Columbia in Vancouver, BC, Canada
UEM	<i>Universidade de Maringá</i> , Paraná state university
UFMG	<i>Universidade Federal de Minas Gerais</i> , a federal university
UFRJ	<i>Universidade Federal de Rio de Janeiro</i> , a federal university
UFSCar	<i>Universidade Federal de São Carlos</i> , a federal university
UNICEF	United Nations Children's Fund
Unimontes	Universidade Estadual de Montes Claros, a state university
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UVic	University of Victoria, BC, Canada
veredas	Characteristic springs of the <i>cerrado</i> with distinctive water quality and surrounding ecosystem
VM	Votorantim Metais, a Brazilian metals company specializing in zinc mining and processing, with a zinc refinery operating in Três Marias (also listed in earlier reports as CMM – Companhia Mineira de Metais – Unidade de Três Marias)
WFT	World Fisheries Trust, a Canadian NGO concerned with equitable and sustainable fisheries

Executive Summary

The current semi-annual report of CIDA project number A020911, ***Brazil Inland Fisheries: Sustainable Livelihoods and Conservation***, covers the period between October 1, 2005 and March 31, 2006. During this period, numerous activities were carried out, including the following highlights:¹

THIRD QUARTER HIGHLIGHTS:

- ⇒ Official youth-led launches of the interactive Barreiro Grande Creek watershed model in Três Marias, Pirapora, Barra do Guaicuí and Ibiaí and at *FestiVelhas* in Morro da Garça built capacity among youth participants, contributed to improving local and regional awareness about watershed and pollution cycles, and raised public profile of the Project.
- ⇒ Support for IDRC-funded UFSCar Water Quality Workshop II contributed to: a) capacity-building among a broad range of community participants in interpreting results of scientific analysis and understanding issues related to water quality, skills useful as preparation for the possible development of a community based monitoring strategy; and b) network strengthening between community participants, local CODEVASF (federal fish hatchery and research station) staff, and representatives of a number of local and state government agencies responsible for managing water quality related issues. This may also be useful in developing community-based monitoring strategies and garnering support for proposals.
- ⇒ *GT Pesca* (Fisheries Working Group) workshop built capacity among fishing community and government environmental agency representatives for creation of pilot fisheries working group, supported institutional strengthening of fishing *colônias* and provided forum for knowledge exchange and other networking opportunities among representatives of fishing communities and government agencies at local, state and federal levels.
- ⇒ *The creation of the Rede Cooperação* (Multi-stakeholder Environmental Monitoring Group), which meets monthly, provided a forum for local network strengthening, trust-building, and information-sharing about fish mortality and industrial environmental impacts between representatives of local *prefeitura* (environment and public health sectors), regional fishing *colônias* and state Federation, state-level IEF, FEAM, IGAM, SESAU (public health), private industry (VM), public water service and hydro providers (COPASA, CEMIG), Public Prosecutors, local NGOs, rural producers and the general public.

The Project continues to be highly relevant and appropriate for the fishing communities, providing numerous new alternatives and options for enhancing sustainability of their livelihoods, including building strong relationships and collaborative links with all levels of government and a diversity of resource users. The Project has made significant contributions during the reporting period towards community-led and multi-stakeholder environmental stewardship, through the investigation of on-going fish mortalities in the Project region of the upper-mid São Francisco river basin.

¹ See report for full list.

FOURTH QUARTER HIGHLIGHTS:

- ⇒ Youth-led interactive Barreiro Grande creek watershed model presentation at the Fifth Minas Gerais State Water Forum in Belo Horizonte (March 20 - 24, 2006) contributed to improving public awareness about pollution impacts on watersheds, and raised public profile of the Project at the state level. The process also strengthened the presentation skills and self-confidence of the youth as they showcased their work to the media and hundreds of people on a daily basis.
- ⇒ Technical visit to Canada on water management and environmental education (February 21 & 22 to March 8, 2006). Participants Silvia Freedman Ruas Durães (CBHSF4 Basin Committee) and Roberto Carlos Rodrigues da Silva (Três Marias Secretary of Environment) learned about Canadian experiences in participatory environmental management, regional cooperation, community-government-private sector partnerships for environmental restoration, corporate social responsibility policies, and integrated in-school and community environmental education.
- ⇒ Barbara Johnsen and Janet Strauss (WFT), a retired primary teacher with many years of experience in integrated environmental education, worked intensively with teachers in a pilot school over a one-month period (March 5 to March 30, 2006) to implement transverse environmental education in the classroom by way of interactive mapping and the watershed models.
- ⇒ *Conferência Estadual da Pesca e Aquicultura* (February 9 & 10): The Project provided organizational and financial support to the Minas Gerais State Fisheries and Aquaculture Conference. The Conference involved representatives of *colônias* from throughout the state in discussions about value-added fish products, public policy related to fisheries and aquaculture, environmental regulations, and aquaculture. State conference delegates elected representatives for the National Fisheries and Aquaculture Conference (March 2006), and built networks among and between fishing *colônias* and representatives of state and federal fisheries management agencies.
- ⇒ *GT Pesca* (Fisheries Working Group) held its first General Assembly (March 20, 2006). The event built capacity among fishing community and government environmental agency representatives for planning and managing a fisheries working group, supported institutional strengthening of fishing *colônias* and provided a forum for knowledge exchange and other networking opportunities among fisherfolk and representatives of government agencies at local, state and federal levels.
- ⇒ Monthly *Rede Cooperação* (Multi-stakeholder Environmental Monitoring Group) meetings continued to provide a forum for local network strengthening, trust-building, and information-sharing about fish mortality and industry environmental impacts between a range of institutions (as identified in quarter 3 highlights). Additionally, a set of thematic working groups have been set up and currently meet prior to the general meeting, to allow for greater technical interaction between institutions and coordination of collaborative research and monitoring efforts.

The Project continues to be cost-effective, despite a continuing shortfall of promised Brazilian counterpart contributions. Progress towards expected short-term outputs within the three sub-projects and three cross-cutting themes is approximately 70%, which corresponds directly with the percentage of financial resources utilized to date – about 70%. Progress towards anticipated medium-term outcomes, fully realizable at the Project's end in 2007, is between 50 and 55%, whereas longer-term impacts cannot be assessed yet.

Summary of Activities²

Activities for Sub-Project 1 – Preparing Communities for Co-management

Activity 1.1.4 - Identify and resolve user group conflicts

Conflict management is an on-going process that continues to be addressed at multiple levels by the Project. *GTPesca* (multi-stakeholder fisheries working group) and the *Rede Cooperação* (multi-stakeholder environmental monitoring group) are new spaces for dialogue and networking that have been created by the Project during this reporting period. Their principal objectives include acting as fora for continuous discussion around issues of conflict and creating opportunities for trust-building between partners. Both groups were created as follow-up to earlier Project activities---*GTPesca* as follow up to the IARA-UFSCar led leadership development and co-management workshops (see Activity 1.2.1 below), and the *Rede Cooperação* as follow-up to the multi-stakeholder forum, Reducing Industry Impacts on the São Francisco River Ecosystem (see Activity 3.7.7).

Partners are encouraged to communicate their actions and articulate concerns through these fora in order to increase transparency. Additionally, participation in facilitated discussions to identify common objectives and develop joint strategies to address on-going problems fosters collaboration and promotes trust-building among participants. *GTPesca* is currently being coordinated by fishing *colônia* representatives with on-going support from Ana Thé (previously of UFSCar, now WFT), the state Federation, and PMMG. Responsibility for coordinating this group is increasingly being shared, with state and federal environmental management taking a more active role in the coming months. This better guarantees their commitment to the continuous dialogue and conflict-management process and by extension, the on-going usefulness of the group. The *Rede Cooperação* is currently coordinated by the Três Marias Secretary of Environment (SEMEIA), with facilitation and organizational support being offered by WFT. This group has made a great deal of progress since its inception. Its membership, who previously did not engage whatsoever with one another, now meet on a regular basis and share information about on-going investigations into a major fish mortality. However, due to a number of factors, including differing objectives for participation in the group, as well as different understandings of and concerns relating to ecosystem, economic and political pressures, this group continues to be very fragile and on-going management is foreseen to be very challenging (see Activity 3.4.4 for fuller details).

Activity 1.2.1 - Transfer of an Amazon experience to the São Francisco River (IARA): Support to GTPesca Workshop – IDRC project

The *GTPesca* (Fisheries Working Group) inception workshop held in Pirapora from November 23 to 25, 2005, was the final official activity of the IDRC-funded *Rumas* project (see Appendix C-1 for the workshop brochure). The workshop was organized and facilitated by representatives of UFSCar (Ana Thé with support from Prof. Maria Inês Mancuso and 2 undergraduate students Fernanda Tibério and Aline Silva) and IARA (Raimunda Queiroz, & Regina Cedeira), with support from WFT (Yogi Carolsfeld and Alison Macnaughton). The workshop participants included key representatives from the Project region fishing *colônias*— Ibiai, Buritizeiro, and Pirapora (including Barra do Guaicuí), two local representatives of the PMMG, representatives of the local and regional offices of IEF, IBAMA, a local representative for Federal Properties (Patrimônio do União) a representative from IBAMA Mato Grosso, and a representative from IBAMA Brasília. Representatives from Três Marias *colônia* and

² See Appendix A for a tabular summary of results and indicators for activities completed during the reporting period, and Appendix B for activities planned for the next period.

FEPESCA were unable to attend due to other commitments. During the workshop there was open and active participation in group discussions and plenary sessions, with relatively equal gender representation among academic, institutional and fishing *colônia* representatives. See Appendix C-2 for the workshop proposal and list of invitees and Appendix C-3 for the draft statute.

The workshop's purpose was to discuss and further develop a proposal for a regional fisheries working group as a permanent forum for discussion, debate and collective organization around fisheries issues, fostering interaction between fishing communities, local, state and federal fisheries-related management institutions as well as academic partners. *GTPesca* would create a structure for continuation of the partnerships and development processes towards co-management. The forum may also foster opportunities for replication and dissemination of the partners' experiences from the Project to a wider region. The Project plans to continue to support and accompany the ongoing development of *GTPesca* over the course of the next year.

The first *GTPesca* General Assembly was also held in Pirapora (March 20, 2006), with organizational and coordination support of Ana Thé (WFT). This meeting built capacity for local partners to plan and manage ongoing activities of the fisheries working group, supported institutional strengthening of fishing *colônias* and provided a forum for knowledge exchange and other networking opportunities among and between representatives of *colônias*, local, state and federal level fishery management agencies. It is hoped that responsibility for coordinating this group will be increasingly shared, with state and federal environmental management taking a more active role in coming months. This will better guarantee their commitment to the ongoing dialogue and conflict-management process and by extension the on-going usefulness of the group. See Appendix C-4 for Ana Thé's field report for the month of March 2006, as well as Activity 1.1.2.

Ongoing support has been provided by the Project throughout this reporting period to the Community Reporters Groups in Beira Rio (Sarah Bryce), Pirapora and Barra do Guaicuí (José Andrade), as well as to individual community reporters in Beira Rio (Dona ZêZê) and Ibiaí (Zé de Nos). In Ibiaí, the regular radio program *Pescador das Notícias* continues with strong local support, while in Barra do Guaicuí a new radio program with an environmental and youth focus was started by one of the local Community Reporters (Debora Ferreira). Groups in Beira Rio and Pirapora continued learning about the editing and layout process for community-produced newspapers that they are actively constructing in each community. They also worked on developing local sponsorship for the printing of the paper among local business owners and associations, as well as participating in a number of short training workshops and collective interviews with invited guest journalists (see also Activity D.4).

Activity 1.2.3 - UFSCar monitoring program: undergraduate projects and final evaluation meeting of IDRC Project Rumos

Partners from UFSCar monitored the outputs and outcomes of the *Rumos* project through workshop reports and undergraduate research projects consisting of informal and semi-structured interviews of Project participants (the CIDA project supported this research by paying transport and accommodation costs for field research in Três Marias). Many of these research projects, as well as others completed during earlier stages of the Project, were presented in October 2005 at the 6th UFSCar Science Fair (*Jornada Científica*). See Appendix C-5 for a list of participants and abstracts of these projects.

A final participatory evaluation meeting of the *Rumos* project, held in Pirapora on November 26, 2005, was facilitated by Alison Macnaughton with support from Joachim Carolsfeld (both of WFT). Thirty percent of the participants were women, 70% were men, which fairly accurately represents the ratio of women to men in the fishing and government organizations present. See Appendix G6 for Alison Macnaughton's report from the evaluation meeting.

The final *Rumos* project report, completed and submitted to IDRC in February 2006 by Dr. Ana Thé e Dr. Maria Inês Mancuso (UFSCar), with contributions from representatives of IARA and UFSCar, includes information from previous reports and interviews, as well as additional feedback from questionnaires distributed to facilitators and participants. See Appendix C-7 for the Rumos Final Report and its appendices.

Activity 1.3.1 - Community policing

Military police continued to be keen participants in all events and activities throughout the reporting period, with lessons from the exchange visits incorporated into training programs. Specific further activities on community policing were not, however, possible during this period. See Figure 1 for a photo taken in Três Marias during a multi-stakeholder water quality investigation in which local environmental police participated.



Figure 1: Local environmental police participate in a water quality investigation

Outputs for Sub-Project 1 on Preparing Communities for Co-management:

Short-term results for activity 1.1.4: New fora for dialogue, networking and conflict management created by the Project with the inception of *GTPesca* (the fisheries working group), and the *Rede Cooperação* (multi-stakeholder environmental monitoring group) during this reporting period. Both groups, are now coordinated by local project partners and represent opportunities for sustaining communication, on-going trust-building and collaborative approaches to conflict management fostered by the Project.

Short-term results for activity 1.2.1: Participatory creation and review of a draft *GTPesca* Statute promotes institutional strengthening among fishing *colônias*, continued capacity-building among representatives of fishing *colônias*, local, state and federal fisheries management agencies to and government environmental agency representatives for collaboration and co-management. A short-term strategy for organizing a series of *GTPesca* meetings and engaging other participants was also built. Continued coverage of Project activities by and networking amongst members of the Regional Network of Community Reporters is increasing local recognition of issues relevant to the fishing community and increasing the Project profile in the region.

Short-term results for activity 1.3.1: Continued active participation of representatives of the military police in all Project activities and events. Continued increase in trust, communication and strengthened networks between active military police participants and representatives of fishing *colônias*, other local, state and federal fisheries management agencies.

Short-term results for cross-cutting theme A (Policy Development): Continued improvements in dialogue, consultation processes and other participatory mechanisms through which state fisheries policies are developed and implemented. Greater self-organization by local fisheries *colônias* and state Federation for articulation of concerns through lobbying at local, state and federal level for adaptations to fisheries legislation, more efficiency and faster return on re-organization of fishery re-licensing process, as well as for appropriate regulatory and remedial action with regard to local environmental issues (especially fish mortality and on-going environmental contamination concerns over air quality, water quality and presence of dangerous sediments). Increased recognition by state and federal environmental regulators of local environmental issues and actions to address these issues (SISEMA – State Environment Ministry's Environmental Agency penalized VM for accidents, State *Ministério Público* signed new legally-binding terms of conduct with the zinc refinery for clean-up of old residues, required Três Marias' municipality to install sewage treatment), and requested monitoring data on the volume of water that is allowed to pass through the dam.

Short-term results for cross-cutting theme B (Public Awareness and Education): Continuing high awareness of local environmental issues (especially fish mortality and on-going environmental contamination concerns over air quality, water quality and presence of dangerous sediments) by local fishing *colônias*, state Federation, local communities, municipal governments, service providers, industry, state and federal levels of government. Continuing local and state level media attention to these issues, presenting a range of perspectives from a number of different stakeholders.

Short-term results for cross-cutting theme C (Women, Youth and Families): Active and equitable participation by women and men in all activities, as well as mutual respect and open dialogue between participants from fishing *colônias*, state Federation, academic partners, local, state and federal environmental and regulatory agencies during all Project-related activities.

The percentage of short-term project outputs achieved to date for Sub-project 1 is estimated to be 60 %.

Outcomes for Sub-project 1 on Preparing Communities for Co-management:

Medium-term results include a significant increase in capacity for self-organization and articulation of concerns by the fishing communities when engaging with the local, state and federal levels of government, as well as increased voice in local and regional media. An increase in transparency and more established networks between partners, as well as more acute recognition of this change and its implications for co-management is apparent among all partners. The participants in the *GTPesca* inception and *Rumos* project evaluation workshops noted significant change in partner's interactions since the beginning of the Project. There has been a notable coming together and collaborative development process between the various stakeholders, especially the fishing *colônia* representatives, the state Federation representatives, the state Military Police and the state environmental agency, IEF. Furthermore, the value placed on collaborative processes has changed. Most participants now rate participatory engagement as very important in the processes of legislation development, regulation and environmental monitoring as a means of securing buy-in and to achieve more balanced approaches. Finally, the ways in which participants view and understand actors' values has also changed, with most participants suggesting that values and objectives of all actors are now closer to one another than in the past. For example, protection of environment, habitat and fish stocks, preservation of sustainable fishing activity and livelihoods are now seen to be objectives shared by all actors, while in the past they were not recognized as being in the interests of multiple actors.

A conservative estimate of how close we are to achieving the medium-term outcomes in Sub-Project 1 is 65%.

Activities for Sub-Project 2 - Building Sustainable Communities

Activities 2.1.2 and 2.1.3 - Technical training to evaluate and improve livelihood and community options – community groups

Workshops for community development and gender equity in the previous reporting period initiated community-driven and directed projects in each of the pilot communities.

In December 2005, a “*Leisure for Everyone*” community recreation project (Três Marias), a group working to restart the Beira Rio Residents’ Association, a group working to start the “Pescarte” crafts and fish products fair, a weekly regional fair “*Feira do Produtor Rural*” (Barra de Guaicuí), and a salt-fish project “*Projeto Corvina*” (Ibiaí) were operating, with some support from José Andrade and Camilo Cortes in Pirapora, and Sarah Bryce and Alison Macnaughton in Beira Rio and Três Marias. However, since this time, the groups have had difficulty keeping their initiatives up and running due to a number of factors, including lack of adequate, on-going institutional support, other commitments, time constraints, a lack of practical tools for community mobilization, limited understanding and experience with the principles and practice of CD and CED, and a general lack of community cohesion.

As these pilot initiatives were not yet sustainably established and several lacked a clear connection with the local fishery, both a Brazilian consultant (José Andrade, October 2005) and a Canadian consultant (John Wojciechowski, March 2006) were engaged to provide on-going support and re-focus the groups on fishery engagement.

In February 2006, a series of participatory assessments of each pilot group’s progress and challenges was undertaken with the consultants and local counterparts (in collaboration with municipal government representatives in Três Marias and São Gonçalo do Abaeté and *colônia* presidents in Ibiaí and Buritizeiro). Plans were subsequently developed for a series of short capacity-building sessions to address the skills and organizational capacity needs of the groups. See Appendix D-1 for examples of CED pilot initiatives, as well as Activities 2.2.1 and 2.3.5.

Activity 2.2.1- Canadian social scientist in Brazil

Alison Macnaughton of WFT continued to engage in planning, coordinating, implementation and monitoring support for all aspects of the Project from Três Marias (November 2005 to February 2006). Through facilitation and promotion of partner participation in a number of Project related and other local meetings, she contributed to network building (*GTPesca*, *Rede Cooperação*) and strengthening of partner NGOs and municipalities (see also Activities 1.1.4 and 2.2.4).

Activity 2.2.4 - Foster NGO networks

WFT staff, project consultants and partner agencies engaged in a number of seminars conferences and other networking events during the reporting period to foster the creation and strengthening of NGO networks. Sarah Bryce of WFT met with representatives of ANAMMA, the National Association of Municipal Environmental Agencies, at its head office in Santo André, SP (December 2005). ANAMMA provides training and support for member municipalities and works at the national level to promote a stronger role for municipalities in environmental management and policy. This meeting resulted in direct contact and information-sharing between ANAMMA and municipal environmental departments in the Project area since January 2006.

In October 2005, Barbara Johnsen (WFT) participated in a regional field survey and planning meetings (Salvador, BA) with the CPT on social and environmental issues in the São Francisco Basin. The survey covered 5 states, involving 200 communities, 180 social entities and 320 other institutions. The purpose of the survey and associated meetings were to identify priority issues and define an agenda for joint action and mutual support among socially and environmentally focused groups in addressing these issues. Barbara Johnsen also participated in Três Marias in an ADETRES-organized opportunities fair, with participation of federal ministries of

culture, environment, and education, municipal governments, as well as philanthropic institutions (February 21, 2006). See Appendix D2 for Barbara Johnsen's report of the CPT Regional Census and Strategy Building Meeting held in Bom Jesus da Lapa from October 14 to 16, 2005.

Activity 2.3.3 - Value-added development in Brazil

During a technical visit to Brazil in December 2005, Canadian consultant Stephen Price, with the support of Joachim Carolsfeld (WFT), Purnima Govindarajulu and Jason Emmert (project volunteers), led training workshops on adding value to fish products by drying and smoking, as well as fish composting techniques, and the construction of dryers, smokers and composters. The workshops, which also included packaging and marketing considerations, were held in Ibiaí and Três Marias. As a result of the workshops, pilot fish drying, smoking and composting initiatives were started in Ibiaí, Beira Rio and Três Marias. In March 2006, John Wojciechowski (WFT) was contracted to provide on-going support to local CED pilot groups in Três Marias and Beira Rio, with special attention to value-added fish products, specifically smoked fish. See Figure 2 for a photo from the value-added fish course held in Ibiaí, as well as Activity 2.3.7.



Figure 2: Smoked fish demonstration in Ibiaí

Activity 2.3.5 - Participatory review of alternate activities: Continued support for pilot CED initiatives

As part of the overall alternate livelihoods strategy, a regional CED management group was formed in January 2006, with participation of the WFT team, and representatives of Três Marias and São Gonçalo do Abaeté municipal governments. The intent of the group is to provide networking opportunities for exchange of successful strategies, brainstorming to overcome common challenges and joint review and planning for specific workshop activities. Additionally, John Wojciechowski (WFT) began a 4-month term in Brazil in mid-March to support community economic development in fishing communities, with a specific focus on fish smoking and the inclusion of women in Três Marias and Beira Rio. See Appendix D-3 for John Wojciechowski's draft CED work plan, as well as Activity 2.3.3.

Activity 2.3.7 - Alternate activity implementation by Canadian and Brazilian sociologists: Support for SEBRAE fish leather courses

SEBRAE-TM is implementing a 1 year artisanal fish-leather program involving training modules on: cooperativism, leather tanning, leather craft production, market evaluation, packaging and marketing leather crafts. This course is being delivered primarily to the TM Artisans' Association (this group is a product of earlier SEBRAE training in Cooperativism and Artesenato), and includes space for participation of members of the local fishing community. The course involves leather made primarily from tilapia. Course modules on cooperativism, leather tanning, craft production and environmental and health concerns were delivered between September and December 2005. All workshops were held at CAP in Três Marias.

Since the proposal's inception, WFT has engaged in on-going discussions with SEBRAE and ADETRES representatives, and promoted the inclusion of a special training module on environmental and health concerns. This module, delivered in a workshop setting with Stephen Price, Purnima Govindarajulu and Joachim Carolsfeld in December 2005, presented and promoted the use of traditional tanning techniques using low-environmental impact products, as well as raising awareness of health risks and precautions, safe storage and disposal of potentially hazardous chemical products used in more modern tanning practices. WFT also promoted the course to fishing community members and has supported their participation in all phases of the program wherever possible (for instance, assisting with funds for transportation to the artisanal fair in Belo Horizonte, displaying products and information about the group and its work at the Minas Gerais State Fisheries and Aquiculture Conference in February 2006). See Appendix D-4 for the workshop report, as well as Activity 2.3.3 notes above about CED Project Corvina in Ibiai.

Outputs for Sub-Project 2 on Building Sustainable Communities:

Short-term results for activity 2.1.2: Increased capacity for local identification of local needs built through participatory evaluation of effectiveness of locally developed pilot CED initiatives and participatory creation of local CED strategies .

Short-term results for activity 2.1.3: As noted for Activity 2.1.2, participatory assessment of each group's progress and challenges built capacity for identifying and working through local challenges to implementing CED.

Short-term results for activity 2.2.1: Network building (*GTPesca, Rede Cooperação*) enhanced participation by Project partner agencies in network activities and built capacity among partner NGOs and municipalities to identify and plan for local challenges and needs, including conflict management and proposals for environmental monitoring.

Short-term results for activity 2.2.4: Greater awareness of existing environmental policy networks and culture, environment and education resource programs and increased capacity for accessing them built among local municipal partners . Expanded awareness of existing social and environmental issues in São Francisco Basin. New knowledge of existing social and environmental organizations and potential for network building.

Short-term results for activity 2.3.3: Interest and capacity built for adding value to fish products through introductory training on drying, smoking and composting techniques for fish, construction of dryers, smokers and composters.

Short-term results for activity 2.3.5: Support for pilot CED initiatives consolidated through creation of regional CED management network. Opportunities for knowledge sharing, lessons learned exchange and joint planning increased.

Short-term results for activity 2.3.7: Training on cooperativism, leather tanning, craft production and environmental and health concerns. Raised awareness of health risks and precautions, safe storage and disposal of potentially hazardous chemical products used in more modern tanning.

The percentage of short-term project outputs achieved to date for Sub-project 2 is estimated to be 55%.

Outcomes for Sub-project 2 on Building Sustainable Communities:

Activities continue to set the stage for desired outcomes of this sub-project, though we foresee that these activities will intensify in the next reporting period. Appropriate supporting networks at the municipal level have been identified and primed, with a variety of possible development directions initiated. These will need to be reviewed, organized in order of priority, and focused on accordingly in the coming year. Confirmation of sustainable outcomes is thus expected in later stages of the Project. An estimate of how close we are to achieving the medium-term Project outcomes in Sub-project 2 is 40%.

Activities for Sub-Project 3 – Securing the Fisheries Resource

Activity 3.1.2 – DNA training in Canada

Gabriel Yazbeck, the DNA techniques trainee supported by the Project, continues to pursue his PhD degree at the UFMG, with several publications submitted in Canada describing the work. While the present work focuses more on Rio Grande basin issues, the interest continues in applications to fisheries management and assessing impacts of supplementation of wild stocks with hatchery-reared fish. Evanguedes Kalakapodis, Gabriel's supervisor who was hosted previously in Canada by WFT, has shifted the focus of his laboratory to fish from spider toxins, demonstrating this new direction of interest. In the final year of the Project, we hope to bring this learning closer to the needs of the São Francisco River, including securing the collaboration of Dr. Pedro Galetti of the UFSCar.

Activity 3.2.2 - Radiotelemetry assistance in Brazil

Alexandre Godinho and other members of his UFMG laboratory who participated in project-supported radiotelemetry activities and training, have completed seminal studies on fish migration in the Project's focal area, and are starting some additional complimentary ones with different species. Training and employing members of the fishing community to assist in this work is still being planned, and we hope to be able to do this in the coming year.

Lisiane Hahn, of the University of Pelotas in Rio Grande de Sul and past recipient of Project assistance, participated in a conference in Portugal in the last reporting period. Through WFT-FAO contacts, she will return to Europe later this year for collaborative research and training.

Both Alexandre Godinho and Lisiane Hahn, together with others trained in radiotelemetry in a WFT-CIDA workshop in 1999, organized a conference, a Brazilian Biotelemetry working group, and a list-server during the reporting period. Lotek, a Canadian manufacturer of telemetry equipment introduced to Brazil by an earlier WFT-CIDA project, was co-sponsor of the conference, though the present Project did not participate directly. We have, however, been active in the list-server, which has turned out to be quite lively and relevant to this kind of research.

Activity 3.3.2 - Assistance for implementing stock assessment options

The workshop on stock assessment options held in January of 2005 has unfortunately had no direct follow-up instigated by the Project during the reporting period. Community support created in this meeting was re-directed to the fish mortality investigation (see below). However, during this reporting period, a stock and fishing evaluation process was initiated by the MMA and IBAMA, to some extent using outputs from the workshop.

A meeting in February 2006 to kick-off this process, organized under the São Francisco Revitalization Program as a São Francisco basin-wide fishing census to be conducted in 2006 by IEF and IBAMA, was attended by Ana Thé (WFT consultant), Alison Macnaughton (WFT staff), Norberto dos Santos (Colônia Z-5 of Três Marias), and Raimundo Marques (Federation). Other participants in the meeting included Project partners from local regional offices of IEF, IBAMA, SEAP, and CODEVASF as well as federal representatives of IBAMA and SEAP and representatives from other regional offices of all three agencies in the entire SF basin. The proposal presented at the meeting included the application of a pre-planned quick survey to collect baseline information characterizing the fishery (type of boats and equipment, size of fleet, locations of fishing activity, embarkation points). Based on the results of the initial survey, a regionally appropriate data collection process will be designed and applied in order to survey fishery activity, gathering information that will serve as the basis for an appraisal of catch levels in the region and by extension, reflect some idea of current stocks and the effects of fishing on these stocks.

The first step in the survey (information-gathering to characterize the fishery) was completed in March 2006 and follow-up meetings to plan the next steps were planned for early April 2006.

Activity 3.3.2. - Support to ongoing investigation of fish mortality

Joachim Carolsfeld (WFT), Alison Macnaughton (WFT), and Jason Emmert (Project volunteer), continued to support the on-going investigations of fish mortalities, the exchange of information between various parties undertaking investigations, and the systematization and dissemination of investigation results. They provided technical support for development and implementation of investigative strategies, pressure for public institutions to pursue more aggressive investigation strategies and involve community members more, and facilitated transfer and dissemination of updated information about the history of the mortality and the numerous ongoing investigations between involved parties. A special focus was maintained on the involvement of the local fishers and fish-sellers, providing clear information and support to the Special Defense of the Environment in the São Francisco River Watershed department of the *Ministério Público*. This was especially important due to the fact that the public prosecutors assigned to manage issues on the São Francisco River have changed a number of times in recent months and were experiencing difficulty in getting up-to-date with contacts and information about the mortality. See Appendix E-1 for the history of the fish mortality investigation.

The Project supported the participation of local fishers in special meetings and hearings in BH with representatives of the *Ministério Público* and promoted and facilitated public discussions and information-sharing sessions between the *Ministério Público* and a group of interested fishers. Local PPA Project partners who played a key role in the support for these activities and in promoting collaboration and transparency between all parties, included Raimundo Marques (Federation), Norberto dos Santos (Colônia Z5 of Três Marias), Sgt. Eduardo Figueiredo dos Santos (PMMG – I Três Marias Environmental Police), and Roberto Carlos Rodrigues da Silva among others.

These processes have contributed to a number of fines for VM and revised plans to deal with their mine tailings in a more effective manner. There are currently also a number of popular and civil society legal cases pending against VM, as well as against state regulatory agencies. This demonstrates an increased community participation in stewardship questions, which the Project has promoted, but it has also created some setbacks to the multi-stakeholder conflict management process that the Project has been trying to implement. Hopefully we will be able to reconcile these two different directions during the last year of the Project. See Appendix E-2 for FEAM's recommendations for mitigating the surubim mortality, including the IGAM proposal for remote water quality monitoring, as well as Activities 1.1.4 and 3.4.4.

Activity 3.3.4 - Evaluation workshops

The Biogeochemical Environmental Laboratory at UFSCar has continued its evaluation of heavy metal contamination in the region, supported by IDRC and the PPA project. The Project supported an educational workshop to present the data in an understandable fashion to the community in mid-November. This was the second in a planned series of three workshops that are meant to build the local fishing communities' capacity to understand technical results and eventually contribute to community-based environmental monitoring programs along the São Francisco River. See Appendix E-3 for the presentation of Dr. Antonio A. Mozeto and Érida F. de Araújo Silva's research results.

Activity 3.4.1 – Reducing industry impact - Mitigation of dam impacts

CEMIG continues to have internal workshops and training sessions based on the experiences from the project-supported technical visit to Canada.

“To date, Procópio and I have written 5 technical reports about the trip. The idea is to cover all the issues that we dealt with and disseminate this information to all levels of the company. We have already done trip presentations for the Generation and Transmission Department, and for the Environment Department, the Western and Triângulo Mineiro power plants, and the Volta Grande Environment Station. In these talks, we focused on the places visited and strategies proposed for mitigating environmental impacts. We are beginning to work with alevin cages as at the Goldstream Fish Hatchery and I am in contact with them for technical support.”
João Magalhães Lope – Biologist, Volta Grande Environmental Station, Environmental Programs and Activities, CEMIG, October 4, 2005.

Activity 3.4.3 – Reducing industry impact - Canadian assistance to implement solutions to environmental problems

The fish mortality of 2005 was an opportunity to contribute a variety of Canadian expertise for monitoring and diagnosing environmental problems. Dr. Jeremy Hackett was hired as a consultant for several weeks in September and October to help organize fish collections with the community and diagnose fish health status. This was complemented in late October by a short technical visit by specialists, Drs. Vince Palace (Freshwater Institute, Department of Fisheries and Oceans, Winnipeg) and Lisa Peters (Canadian Rivers Institute, University of New Brunswick, Department of Biology) – both with time contributed by the Department of Fisheries and Oceans – and a Brazilian consulting specialist in fish pathology (Geraldo Eysink). All contributed to the multi-stakeholder forum at the end of September and have provided subsequent input during the reporting period. Geraldo Eysink presented a training seminar to state government agencies in November (paid by FEAM) and follow-up field visits were supported by the Project. Drs. Palace and Peters are providing free analytical support at the Freshwater Institute, and Professor Godinho of PUC-Minas organized the export permits for tissue samples that were sent to a Canadian laboratory for analysis.

Brazilian trainees will travel to Canada in May, 2006, to assist in the tissue analyses – applying methodologies and analysis strategies not currently used in Brazil, so will contribute to new Brazilian capacity (see also 3.2.2, 3.4.4 and 3.7.7). Histological analysis (microscopic examination of tissues) is currently being provided by Professor Godinho at the PUC-Minas. However, we hope to move this to the UFMG as Prof. Godinho retires, and complement the expertise with input from Canada, primarily on how to identify specific signals of pesticide, metals, or sewage-induced stressors. Bacteriological expertise, the focus of Jeremy Hackett's input, was complemented by input from Dr. Luciene Lima at the Veterinary School of the UFMG – also a link we hope to strengthen to contribute to a coalition of expertise in Minas Gerais that can respond better to fish mortality occurrences and assist in longer term environmental monitoring. See Appendices E-4 and E-5 respectively for the technical reports of Jeremy Hackett and Geraldo Eysink.

Activity 3.4.4 - Reducing industry impact - corporate policies for social and environmental responsibility

Responding to the ongoing surubim mortality, the Project-led multi-stakeholder forum in late September set the stage for more responsible and transparent industry and government environmental policies and practices. The forum and subsequent technical mission by Roberto Carlos Rodrigues da Silva and Silvia Freedman Ruas Durães to Canada, built local capacity to demand and deliver participation in environmental regulatory and monitoring decisions and activities, including hosting the *Rede Cooperação* that evolved out of the forum. As a result, regulatory actions by state and federal agencies, including IEF, FEAM, IGAM, ANA and the Ministério Público (Public Prosecutor), are now all openly communicated to the municipal government, which has taken on the responsibility of making this information public. The zinc refinery (VM) has publicly recognized contamination

problems and announced measures to reduce these. See also Activity B.2.4 and Appendix F- 13e for an article on VM.

From October to March organizational support was provided to the implementation of meetings of *Rede Cooperação Monitoramento*, as a follow-up to the Forum held from September 29 to 30. WFT is engaging in ongoing discussions with various partners with a view to building trust between stakeholders and network-strengthening. See Appendix E- 6 for WFT's presentation on an overview of *Rede* functions and activities.

Coordination of the *Rede Cooperação* multi-stakeholder cooperation network for monitoring and reduction of industrial impacts related to the surubim mortality, was taken on by the Três Marias municipal environment secretariat, Roberto Carlos Rodrigues da Silva of SEMEIA with support from his assistant, Wesley Moreira. With Project support, SEMEIA has organized and implemented five meetings, all attended by a wide range of institutions and members of the fishing community (usually approximately 50 representatives of a wide range of stakeholders in the fish mortality - from local, state and federal government, industry, fishing *colônias*, civil society organizations, and academic institutions). The December 15 meeting, for example, lasted six hours with no breaks. See Appendices E-7 for *Rede Cooperação* meeting invitations; E-8 for minutes (November 18, 2005 and January 31, 2006); and E-9 for a copy of the *Rede Cooperação* website information.

On the agenda were presentations by representatives of industry, the state environmental agency FEAM, the *Ministério Público*, local government, and civil society. See Appendices E-10 for a list of participants and vision statement, as well as E-11 for reports presented at various meetings by SISEMA (FEAM, IGAM, IEF), VM, UFMG, and LBGqA-UFSCar. Key participants in the organization and support to the network included: Joachim Carolsfeld, Sarah Bryce, Alison Macnaughton (all of WFT), Jason Emmert (volunteer), Roberto Carlos Rodrigues da Silva and Wesley Moreira of SEMEIA, Raimundo Marques from the Federation, and Norberto dos Santos for SOS São Francisco. See Appendices E-12 for the draft statute proposed by *Rede Cooperação* and E-13 for presentations of VM-sponsored research to *Rede*. In the face of increasing polarization and litigation, maintaining an institutionally balanced representation and relevancy of this network in the longer term will be a considerable challenge in the final year of the Project.

Previous PPA investment with invasive mussel species continues to have an impact, with corporate policies of CEMIG and government protocols, though a full control and education protocol does not yet exist. As the industry and government are now fully aware of available Canadian expertise and are capable of building appropriate strategies, the Project has not been investing further in this area.

Subsequent to participation in the Canadian technical visit, CEMIG has also demonstrated a greater interest in community relations on environmental issues and environmental rehabilitation. We hope to pursue these opportunities further in the final year of the project.

Activity 3.6.1 - Improving water management practices - Brazilian mission to Canada to review water management practices

Water management practices were included as one of the key topics in both the hydroelectric technical visit to Canada in June 2005 (activity 3.4.1) and in a subsequent technical mission in late February 2006, by Silvia Freedman Ruas Durães (President of the local Water Basin Committee – SF4 and Executive Director of COMLAGO consortium of municipalities on the Três Marias reservoir) and Roberto Carlos Rodrigues da Silva (Environment Secretary, Três Marias). The trip was organized and led by Joachim Carolsfeld (WFT) and Alison Macnaughton (WFT) from February 22 to March 7, 2006.

The trip involved in-kind contributions from a number of Canadian organizations, including Matt Foy (DFO), Edith Tobe (Squamish River Watershed Society), Randall Lewis (Squamish Nation), Victor Elderton (North Vancouver Outdoor School), Cathy Carolsfeld (Seaquaria), Nikki Wright (SeaChange Society), Davis Marshall and Jessica Bratty (Fraser Basin Council), Laura Taylor (Capital Regional District), Ian Bruce (Peninsula Stream Society & Pacific Institute for Ocean Sciences), Joe Carvalho (Hartland Landfill), Jason Lasuik (Gorge Waterway Restoration Initiative), Lee Newman and Jennifer Reynolds (Vancouver Aquarium), Robyn Bonson (Annacis Island), Jenyfer Neumann (Township of Langley), Marlene Doyle and Dr. Hague Vaughan (Environment Canada), and Sheila Lawrence (Ontario Hydro).

Principles learned on the trip³ have been rapidly incorporated in the strategic plans of all groups. We expect to see some interesting tangible results in the coming year. Ideas presented include participatory environmental management, regional cooperation, multi-stakeholder conflict management, community-government-private sector partnerships for environmental restoration, corporate social responsibility policies, and integrated in-school and community environmental education. See Appendices E-14 for a trip report by Roberto Carlos Rodrigues ; E-15 for Silvia Freedman Ruas Durães' pre-trip presentation on behalf of CBH-SF4 and COMLAGO; and E-16 for Roberto Carlos Rodrigues da Silva's presentation used during his Canada visit and delivered in January 2006 at the MMA/CT-Hidro workshop, *Perspectives on Aquatic Resources*.

Activity 3.6.3 - Improving water management practices - Canadian in Brazil to help develop water management model

Canadian consultant Jason Lasuik, as part of activities related to participatory construction of watershed models in Beira Rio and Três Marias, introduced local municipal partners (SEMEIA) to the concept of a Residential EcoPartners Pledge, a tool to encourage local environmental stewardship. Implementation of these initiatives will depend heavily on local counterpart support and initiative developed from results of lessons learned on technical trip for water management (see activity 3.6.1), as lack of funds for the Project mean that ongoing support or follow-up visits by a Canadian consultant may not be possible. See also Activity B.1.2 and Appendix F-7

Activity 3.7.5 - Community based environmental improvements as part of community workshops

The Project team contributed to several proposals for Brazilian funding in the areas of environmental management and restoration. However, the proposed visit of Canadians to Brazil to address issues of water management and environmental restoration, and Project support for related activities in Brazil, are likely to be eliminated from the Project's plans for lack of funds.

Activity 3.7.7 - Develop pollution assays

The contributions to the Project made by Vince Palace and Lisa Peters have introduced some new tools that may be used for monitoring contamination and pollution. Specifically, they proposed monitoring physiological responses of small-bodied fish as bio-indicators of pollution. The technology needed for doing this will be transferred to some Brazilian trainees in Canada in the next quarter, and steps have been taken to build a multi-institutional team that could carry this initiative forward in Brazil (with continuing collaboration of Drs. Palace and Peters and DFO). However, other sources of funding will need to be identified to make this initiative sustainable.

Steps have also been taken to keep the community involved in environmental monitoring, ideally in a volunteer capacity. However, interest has waned due to the slow return on analyses, the start of litigation processes, the deterioration of trust amongst user groups, and expectations of financial compensation. VM and SEMEIA have launched a monitoring program of fish mortalities with paid monitors, for which WFT provided some technical advice. However, multi-lateral contributions to the program are still needed to make these results acceptable to the variety of stakeholders.

IBAMA (Brasilia) has also proposed the implementation of a program of volunteer environmental agents in Três Marias, responding to a request by the Project last year. However, the local fishers and local IBAMA personnel are finding the volunteer and practical expectations of the program unrealistic – the future of this initiative remains to be seen.

Sewage treatment options and recycling technologies were components of all technical missions to Canada during the reporting period. Lessons learned are being implemented by a new garbage collection program in Três Marias. Sewage treatment alternatives are also likely to be on the agenda for the coming year. Other

³ For example, from the Fraser Basin Council's role in fostering basin-focused regional cooperation, and from DFO's experience managing conflicts between user-groups and regulatory agencies with regard to fish habitat protection in Squamish, B.C

initiatives for developing pollution assays and bio-indicator monitoring programs are not likely to go forward during the Project's tenure due to lack of funds.

Outputs for Sub-Project 3 on Securing the Fisheries Resource:

Short-term results for Activity 3.1.2 Increased interest by Brazilian academic partners in fish DNA studies, as well as increased activity by these same partners in publishing.

Short-term results for Activity 3.2.2: Enhanced discussion and internet networking among academic project partners related to radiotelemetry and development of associated technology.

Short-term results for Activity 3.3.2: Increased community participation in stewardship questions. Recognition by MMA and IBAMA of the importance of fishing *colônias*' active participation as implementation partners to the success of planned fisheries census activities.

Short-term results for Activity 3.3.4: Fishing community capacity built to understand technical results and eventually contribute to community-based environmental monitoring programs.

Short-term results for Activity 3.4.1: On-going training by CEMIG around issues of invasive species prevention and control, as well as other issues related to mitigating the impacts of dams on river systems.

Short-term results for Activity 3.4.3: New Brazilian capacity for methodologies and analysis of fish tissue samples for identification of specific signals of pesticide, metals or sewage – induced stressors.

Short-term results for Activity 3.4.4: Increased transparency in regulatory actions by state and federal agencies, including IEF, FEAM, IGAM, ANA and the *Ministério Público* which are now all openly communicated to the municipal government. Also, public recognition by the mineral company (VM) of contamination problems and subsequent announcement of measures to reduce these.

Short-term results for Activity 3.6.1: New understanding of basin-focused regional cooperation and conflict management between user-groups and regulatory agencies with regard to fish habitat protection learned from exposure to Canadian examples.

Short-term results for Activity 3.6.3 Awareness of Canadian models for encouraging local environmental stewardship built among Brazilian municipal partners.

Short-term results for Activity 3.7.7: Capacity-building in interpreting results of scientific analyses and understanding water quality issues---useful skills for developing community-based monitoring strategies. Institutional and network strengthening amongst a host of community participants, local CODEVASF fish research station employees, and government representatives---all focused on water quality management issues.

Short-term results for cross-cutting theme A: Improved local policy for communication, inter-agency cooperation and community involvement. Change in industrial practice re: transparency about research, "passive environmental" impacts and strategies to mitigate them.

Short-term results for cross-cutting theme B: Awareness about fishery and water quality issues has continued to increase at the local, regional and national levels due to publicity associated with the on-going fish mortality, as well as through the activities of the *Rede Cooperação* in publicizing proposals and preliminary results of the various water-quality, ecosystem, fish and human health studies currently underway in the region. In addition to the monthly public meetings, the *Rede Cooperação* posts minutes of past meetings, presentations and other news on its website. In March 2005, the *Rede Cooperação* published its first monthly information bulletin, summarizing the meeting discussions, for regional distribution.

Short-term results for cross-cutting theme C: Women and men have been participating actively in all activities. Women and men, youth, middle-aged and elderly members of fishing communities participating in activities related to the *Rede Cooperação*, with entire families often attending public meeting sessions together. It has been noted by participants and coordinators that large public meeting or seminar formats of activities and events can sometimes be limiting in their accessibility to fishing community participants, both because of timing and because of levels of comfort in this setting. The Project has responded by adjusting strategy to employ a range of different types of venues and attempt to set meetings for times and places that meet the accessibility and comfort needs of participants – mostly through a greater focus on community-based meeting venues as well as on home visits to discuss Project-relevant issues with participants. This strategy will continue to be employed in all PPA Project activities.

The percentage of short-term project outputs achieved to date for Sub-Project 3 is estimated to be 45%.

Outcomes for Sub-Project 3 on Securing the Fisheries Resource:

The most marked outcome in this sub-project to date is the greater participation and recognition of the fishing community in the consideration of impact reduction and environmental monitoring by the government and other partners, and the level of ownership the community has taken of the investigation of fish mortalities. This will be an important basis for the intensification of activities in this component in the coming year. We estimate that we are 50% towards achieving the medium-term project outcomes proposed for Sub-project 3.

Activities for Cross-Cutting Theme A – Assist the Development of Policies for Sustainable Fisheries with Community Participation

Activity A.1 - Multi-stakeholder fisheries meeting - Contribute to Fisheries Policy

The Project continues to influence fisheries policies, primarily at the state level through IEF and the Military Police, as well as community and municipal policies and industrial practices. These are inherent in the activities reported above and/or are on-going impacts of past activities as the policies evolve. In addition, we have included participation in conferences within this category, and results of the Project were presented in three international conferences during the reporting period, with the Project supporting participation in the two international conferences that were held in Brazil.

Activity A.3 - Participation in conferences and events

The Project sponsored a portion of the Minas Gerais State Fisheries and Aquaculture Conference, held in Ibité MG on February 9 and 10 (see Appendix F1 for the conference invitation and brochure). Conference participants included: Alison Macnaughton (WFT), Barbara Johnsen (WFT), Raimundo Marques (FEPECA), Norberto dos Santos (Três Marias *Colônia*), Miguel Ferreira de Andrade (Três Marias *Colônia*), Bia (*Colônia Ibiai*), Maria Eunice (Buritizeiro *Colônia*), Maria Socorro (Buritizeiro *Colônia*), Tais Lopes (Pirapora *Colônia*), and Andrea Alves (São Gonçalo do Abaeté municipal government). The conference involved representatives of *colônias* from throughout the state in discussions about value-added products, public policy related to the fisheries and aquaculture, environmental regulations, and aquaculture. Participants elected representatives to participate in the National Fisheries and Aquaculture Conference, and built networks between *colônias* and between representatives of state and federal management agencies and fishing *colônias*. The event provided a good opportunity to enhance understanding of fishery-related issues by the Project's local government participants.

GTPesca was also promoted at the event, with an overview of the purpose and organizational structure of the group presented by Maria Eunice, Maria Socorro and Tais Lopes to the conference plenary session. Current

challenges to building confidence and a network between SEAP, *colônias* and the *Federação* include the current stall in re-issue of expired professional fishing licenses and in non-payment of unemployment benefits to registered fishers. These are results of a complex re-organization and re-registration of all fishers in the state currently being undertaken by SEAP in an attempt to check the veracity of the large number of registered professional fishers in the state.

Other conferences PPA Project personnel participated in included the São Francisco Day *Romaria das Águas* event held in Pirapora on October 4, 2005. Thaís Madeira, the gender specialist in the Project from UFSCar, participated in a gender conference in Salvador, Brazil during the reporting period to discuss PPA activities (see Appendix F-2). Barbara Johnsen (WFT), Sarah Bryce (WFT) and Project volunteers participated in an introductory workshop for the Três Marias Agenda 21 planning process, organized by COMLAGO, the municipal government environmental secretariat and state secretary of the environment (February 1-2).

Outputs for Theme A on Policies for Sustainable Fisheries with Community Participation:

Short-term results for Activity A.3: Increased capacity and creation of opportunities among Brazilian partners to articulate views on fisheries related issues. Enhanced networking with a range of different NGOs and government agencies through a variety of fisheries and basin issues events.

Outcomes for Theme A on Policies for Sustainable Fisheries with Community Participation:

All sub-projects have contributed to improved self-determination of the fishing communities and increased positive interaction with government and industrial stakeholders and managers. Supportive policies to foster this input have resulted, and are gradually being implemented – at times through fairly subtle processes. Advances can be estimated as 50% of the overall desired medium-term outcomes.

Activities for Cross-Cutting Theme B – Public Awareness and Education

While public awareness and education are cross-cutting themes addressed in some fashion in all activities, environmental education was identified as being of particular interest as a specific objective and specific activities. We also report on publications related to the Project in this section.

Activity B.1.2 – Activities for a riverine community target - Create pilot educational tools and materials– Interactive watershed model launchings - Develop and install interactive watershed model

Consultants Jason Lasuik and Barbara Johnsen (WFT), with the support of Sarah Bryce (WFT) and Karen Timlick (Canadian project volunteer) worked with a team of approximately 15 volunteers (equal female and male participation, mostly youth) from the fishing community and wider Três Marias community in October to build a watershed model of the Barreiro Grande Creek in Três Marias. Additionally, over 50 youth from the local Três Marias *Agente Jovem* program, as well as more than 200 schoolchildren ranging in age from 5 to 18, visited the model during its construction, participated in some aspect of its development and learned about watersheds in the process. In November, the model was launched by the team of youth who built it at a public event with approximately 130 representatives of the Três Marias municipal government, city council, local business, environmental and fishing civil society organizations, Três Marias government youth programs, and other Project partner institutions. See Appendix F-4 for a number of documents related to the watershed model activities; F-5 for Barbara Johnsen's activity reports.; and F-6 for Jason Lasuik's third quarter reports.

The Municipal Secretary of Education in Três Marias, assigned Matilde Mesquita as in-kind support to accompany and support project activities on a full-time basis. Special focus was placed on watershed models

and environmental education, as well as putting together an archive about the project and river issues in the town library.

During his stay in Brazil, Jason Lasuik's presentations to municipalities, schools, teachers, youth and local water service provision agencies and interested members of the fishing communities focused on his Canadian experiences with interactive watershed models and their usefulness as a tool for promoting local environmental stewardship. He discussed with the audiences ways to make decisions at the individual and local level that reduce our impact on streams and rivers, and presented Residential Pledge (RP) and Best Management Practices (BMP) programs for local businesses as examples of impact reduction strategies that have been successful in Canada (see 3.6.3 and 3.7.5 as well.) See Appendix F-7 for Jason Lasuik's comparative article on the use of watershed models in environmental awareness-raising.

Construction of two additional interactive watershed models began in March 2006, with youth involved in the first model now leading the process for one model in Beira Rio, accompanied by Jason Lasuik and with the support of a draft how-to manual that Jason worked on between his two visits to Brazil. The other model is being constructed in Pirapora as a partnership with SAAE, the local water service provider, in partnership with the municipal secretary of education and the UNIMONTES University geography department. Jason Lasuik, Barbara Johnsen, Sarah Bryce and Matilde Mesquita (Três Marias municipal secretary of education) are accompanying the two processes and supporting the emerging role of the Beira Rio youth as replicators and teachers of the participatory model building process. The draft manual is being test-run by the two groups, who will contribute to editing the final edition which will be used as a dissemination and replication tool for the participatory watershed model construction and implementation process. See Appendices F-8 for Jason Lasuik's March 2006 report; F-9 for the draft watershed model construction manual; in addition to Activity B.2.2.

Activity B.22 - Pilot travelling displays/stands and folders

The interactive watershed model of Barreiro Grande Creek, built by the Beira Rio – Três Marias youth team with the support of Jason Lasuik, has been showcased by the team at a number of different events including: on November 11-12, 2005 at "*FestiVelhas*"; a state-wide festival celebrating the environment and traditional culture of Minas Gerais, hosted by Projeto Manuelzão (a UFMG-sponsored community health and environmental education project focused on the Rio das Velhas, a tributary of the Sao Francisco River); in the town of Morro da Garça; November 18 at the XIV Technology Fair at IEBG School in Tres Marias (see Appendix F-10 for the brochure); from December 2 to 6 in the fishing communities of Pirapora, Barra do Guaiçú and Ibiaí; and at the Fifth Minas Gerais State Water Forum in Belo Horizonte from March 20 to 24, 2006.

Overall, a number of different presentations were made to various audiences, with consistent positive audience response and interest in replicating the participatory watershed model building process. At all venues where the model was showcased, the youth team led public presentations explaining the participatory model-building process and demonstrating its usefulness as tool for raising awareness about human impacts on local watersheds. Over the course of the model building process, the youths became more aware of their local environment and the interactions that occur within it, learning to represent these environmental values and concerns on the model. They also gained significant experience with public speaking (speaking to small and large groups of youths, adults and the media) experienced raised self-confidence, and became skilled at engaging others in discussion about the region and its issues. See Appendices F-11 for the invitations to launching events (November 7 in TM, December 2 in Pirapora and December 3 in Ibiaí); F-12 for the presentation outline used by the youth when demonstrating the model. See also Activity B.1.2.

Activity B.2.4 – Contribute to local press on fisheries issues

Several articles have been published in local Brazilian newspapers featuring project initiatives, most notably the watershed model. These include: a one-page feature article on the project-municipality partnership and its achievements with youth-led initiatives over the past year in the Sao Goncalo end of year municipal journal (Appendices F-13a & F13-b); and two half-page feature articles in the regional newspaper, *O Sertanejo* (November 2005 and March 2006), describing the Project and its activities – highlighting the youth-led watershed model activities. See Appendices F-13c, F-13d, F-13e for the *Sertanejo* articles.

There has also been an increase in local, state and national press attention to fisheries issues. Articles were published about fisheries issues in the São Francisco basin. Project partners were interviewed for a number of these articles, including several which focused on the on-going *surubim* mortality, related research, investigations and public hearings. See Appendices F-13f, F-13g, F-13h, F-13i and F-13j for articles. Local and state television news coverage increased this reporting period, with a number of segments featuring the interactive watershed model and other Project activities (see also Activity 2.1.3).

In March 2006, the Project also began supporting the production of a monthly flyer produced by the *Rede Cooperação*. This flyer highlights the activities of the *Rede Cooperação* toward reducing industry impacts on the environment and increasing public transparency about environmental monitoring activities undertaken by government and industry. WFT, UFSCar and other project partners also contribute to the network's website, which is sponsored and maintained by SEMEIA, of the Três Marias municipal government (see also Activity 3.7.7).

Activity B.2.5 – Evaluate educational goals

A two-part environmental education workshop for local educators was implemented October 3 and 4 and November 7 and 8, 2005. The workshops, with certification as a UFSCar extension course, were held at CAP in Três Marias, facilitated by Dr. Haydée Torres de Oliveira (UFSCar) with the support of UFSCar master's student, Tatiana Terasin de Lima, Barbara Johnsen and Sarah Bryce (both of WFT). Twenty four elementary school teachers and school administrators, and six outreach environmental educators from the entire Project region participated in the workshop series, whose objective was to share experiences and build capacity for environmental education as a transversal theme in the classroom. In addition to a theoretical component, the teachers created small-scale, innovative pilot projects tied to local watershed issues. Examples of projects include: a Barreiro Grande stream clean-up done by municipal staff with door-to-door information distribution by youth from the Agente Jovem program (Três Marias), poetry-writing about environmental themes (Barra do Guaicuí), participation in an event about water, dressing as traditional users of the river (washerwomen, fishers) and preparing music and art about these culturally-important figures (Buritizeiro), garbage clean-up by students in the streets in conjunction with a river clean-up organized by the local *colônia* at the same time (Ibiaí), field trips to the São Francisco River and subsequent classroom art activities (Pirapora) and others. (See Appendix F-14 for pilot project reports from the teachers)

In the second workshop, teachers shared experiences in implementing the projects, discussed structural and other challenges to the transverse environmental education as a teaching approach and brainstormed strategies for effective implementation. On February 16 and 17, Tatiana Terasin de Lima (UFSCar) visited the project area to assist with planning for interactive watershed model workshops and prepare her master's thesis project, which it is hoped will involve research in Três Marias on strengthening environmental education in the formal education system. See Appendix F-15 for Tatiana Terasin de Lima's report on the course.

Janet Strauss (WFT), a retired primary teacher with many years of experience in integrated environmental education in Canada, participated in a technical visit on participatory planning and integrated watershed education in March 2006, as part of the implementation of the Project's Environmental Education Strategy developed under the leadership of Cathy Carolsfeld (WFT). During her time in Brazil, Janet Strauss worked with teachers in a pilot school from March 5 to March 30, alongside Barbara Johnsen, to implement classroom experiments using mapping as a tool to develop more integrated and effective environmental education at the primary level. These activities included facilitating a series of mapping workshops and in-class demonstration activities with teachers in a pilot school, Escola Municipal Professor Johnsen in Três Marias, and holding introductory mapping workshops with representatives of all the municipal schools in Pirapora and both schools in Barra do Guaicuí.

The teacher workshops and technical visit provided opportunities to reflect on the effectiveness of different strategies for implementing transverse environmental education at the local level. As noted by Janet Strauss, the teachers faced a number of structural and pedagogic barriers to changing their classroom practices. Intensive in-classroom training with on-going support and follow up from the project team in one specific pilot school was found to be more effective in creating change than the workshop format. It remains to be seen what the long

term effects of both strategies will be. To provide continuity and promote sustainability, a second trip is planned where Janet will begin to replicate the intensive in-classroom strategy in a second pilot school, while also following up with the first school. See Appendices F-16 for Janet Strauss' field activity report; and F-17 for Barbara Johnsen's monthly report for March 2006.

Outputs for Theme B on Public Awareness and Education:

Short-term results for Activity B.1.2: Capacity-building among youth participants in the research, construction and presentation of interactive environmental education tools. The watershed model launches in Três Marias and Morro da Garça, improved local and regional awareness concerning pollution and watershed cycles, and raised the PPA public profile.

Short-term results for Activity B.2.2: Increased regional exposure to participatory interactive watershed model building process. Increased awareness at local and regional levels of human impacts on watersheds and ways to manage these impacts. Capacity, self-confidence and new skills built among youth participants for public speaking and engaging the public in dialogue about regional environmental issues.

Short-term results for Activity B.2.4: Raised awareness of project activities, fisheries issues, and environmental issues at local and state levels.

Short-term results for Activity B.2.5: Capacity built among local teachers for integrated environmental education. Implementation of pilot initiatives by teachers as a result of the environmental education course, ranging from awareness-raising and creek clean-up campaigns to community gardens.

The percentage of short-term project outputs achieved to date for Cross-Cutting Theme B is estimated to be 45%.

Outcomes for Theme B on Public Awareness and Education:

Public awareness of the fishing profession has improved through the Project activities, particularly among closely related stakeholders and government managers. Educational elements for the environment have also had substantial impact on participants as well as the general public. Advances can be estimated as 40% of the overall desired medium-term outcomes.

Activities for Cross-Cutting Theme C – Creating Opportunities for Women, Youth and Family

Activity C.1 – Workshop component on women's needs

In October 2005, Erika de Castro, a Canadian consultant, conducted a technical visit on gender, community development and youth. She supported the planning and implementation of follow-up activities for the series of gender and CED workshops held from June to July 2005. She assisted in visioning and multi-stakeholder strategy building for the Project, particularly in the areas of fostering CED opportunities for women, youth and families in a fashion that fosters sustainability of the fishing livelihoods and communities. This included assisting in the planning and implementation of the two-week technical visit by Susan Kurbis of the Environmental Youth Alliance, who led visioning, assessment and capacity-building workshops for youth) in September/October, and providing on-going advice and assistance in implementing follow-up from this activity (see C.3 below). Erika also provided technical expertise and support for the development and implementation of on-going collaboration between the Project, local government, and other key local actors in community development strategies and

initiatives. She also provided continuous follow-up advice and support to the Project for progress monitoring, indicator identification, promoting sustainability of Project gains, and planning of the production of Project outputs.

Specific recommendations were that the Project needs to foster and assist the development and implementation of a gender strategy within all municipalities, including youth and communications components, and seek out ways to involve both urban and rural women. Also, the Project should implement activities to enhance and strengthen the gains from previous workshops involving females---both women and youth---as well as look for opportunities to strengthen local and regional linkages and networks advancing their interests. Future activities could include a survey of accessible agencies and organize a program for capacity-building for women and youth related to CED, for instance marketing and cooperatives. Finally, Erika recommended the purchase of six Portuguese book titles related to gender diversity by the PPA for access to Project personnel and partners (see also Activity C.3).

Ana Carolina Bichoffe, an undergraduate student at UFSCar, prepared a thesis on gender relationships in fishing communities, based on research in the Project (see Appendix F-18). Another UFSCar student, Priscila Medeiros, prepared a thesis on race relations in the fishing communities (see Appendix C-5 for summaries of both of these students' research). Also, Thais Madeira continued preparations for her thesis on gender which she will be defending in mid-2006. On March 8th there was a celebration for International Women's Day in Pirapora in which Ana Thé (WFT) participated. In Três Marias, various activities were organized by the municipal government in which WFT representatives participated.

Activity C.1 – Participation in Gender Conferences

With the objective of assisting in the development of gender policies with community participation leading to more sustainable fisheries, Thais Madeira, the gender specialist in the Project from UFSCar, participated in a gender conference in Salvador, Brazil to discuss PPA activities during the reporting period (see Activity A.3 and Appendix F-3).

Activity C.3 – Youth workshop identifying needs and strategies, ongoing implementation of activities with pilot youth groups

Canadian consultant Susan Kurbis (Environmental Youth Alliance), with the support of Erika de Castro, José Andrade and Sarah Bryce, implemented a series of youth-led needs identification workshops involving community-based asset mapping as part of a technical visit to the Project (September 27 to October 7). Following her visit and drawing on the assets, needs and issues identified, Susan drafted a Youth Engagement Strategy (November 2005) for the Project region. Canadian EYA intern Camilo Cortes was placed in Pirapora to provide implementation support to Susan's recommendations. Susan also made a presentation of her experiences with youth led environmental monitoring and restoration projects as part of the Multi-Stakeholder Reducing Industrial Impacts on the Ecosystem Seminar held in Três Marias in September 2005. See Appendix F-19 for Susan's report and Activity B.1.

José Andrade (WFT) and Camilo Cortes (EYA intern) began working with youth and youth programmers in Pirapora, Ibiai, Buritizeiro, and Barra do Guaicuí, while Sarah Bryce began work in Beira Rio and Três Marias) as follow up and implementation support to Susan Kurbis' report recommendations (see Appendices F-20 and F-21, respectively, for José Andrade's and Camilo Cortes' monthly reports for the third and fourth quarters). As part of this implementation, José, Camilo, and Sarah developed a number of neighbourhood specific youth-developed pilot initiatives in partnerships with local youth programmers (*Agente Jovem, Pingo de Luz, Projeto Renascer*, Ibiai Secretary of Environment, Beira Rio SETUR) to promote local environmental awareness, foster youth engagement and build community pride. These included several community clean-up initiatives, creation of a local rap group, several income generation and cultural planning groups, the creation of a local Youth Association (Beira Rio) and a number of short activities including video-making, and marginal vegetation restoration, for instance. The youth engagement and environmental education activities in Pirapora, Ibiai and Barra do Guaicuí wrapped up and final events were organized in February 2006 to coincide with the end of Camilo Cortes' EYA internship. See Appendix F-22 for the power point presentation given on January 23 and Figure 3 for the November youth workshop materials.

As follow up to these activities, José, Camilo, Sarah, Alison and Barbara met with municipal coordinators of youth programs on February 16, 2006 about the goals and successes of the PPA youth activities in Pirapora. This began a joint planning process with Pirapora municipal employees to develop a training module for all youth workers and propose the preparation of a training manual (to be co-written by José Andrade and municipal staff) based on the Project experiences with youth engagement through environmental projects. See Appendices F-23 for the February 16 power point presentation and F-24 for a report from the Secretary of Sports, Leisure and Tourism of the SGA municipality regarding youth, CED and tourism.

Typically, youth participants in Project activities are very active and participate in a range of available project activities. For example, youth in Beira Rio and Três Marias were also the primary participants in the participatory interactive watershed model construction process and founders of the Beira Rio Youth Association; youth in Pirapora, Barra do Guaiçui, and Beira Rio continue to be active community reporters.

In the next reporting period, youth representatives of the newly created youth groups will travel to Canada by invitation from the EYA to share their experiences and participate as delegates in the World Youth Jam, as part of the World Urban Forum.



Figure 3 Pirapora youth participating in a n *Agente Jovem* activity

Outputs for Theme C on Creating Opportunities for Women, Youth and Family:

Short-term results for Activity C.1: Participatory identification of the specific opportunities and barriers faced by women from fishing communities and training of facilitators to improve the situation.

Short-term results for Activity C.3: Participatory identification of local youth needs and capacities. New capacity built among local youth programmers for creation and implementation of innovative youth engagement and environmental education activities. Interest built among local youth for self-organization and participation in local environmental education and stewardship initiatives.

The percentage of short-term project outputs achieved to date for Cross-cutting Theme C is estimated to be 45%.

Outcomes for Theme C on Creating Opportunities for Women, Youth and Family

The percentage of progress towards medium-term project outcomes to date for Cross-Cutting Theme C is estimated to be 40%.

Management Activities Completed

Activity D.1 - Project Website

Updating the project website during this period was hampered by the maternity leave of the website specialist. Training of Brazilian partners for updating and directly uploading materials did not happen.

Activity D.2 - Project newsletter

The current communications strategy is to involve municipal partners (specifically SEMEIA and SETUR Beira Rio) and the Federation in newsletter production and distribution in a concerted effort to increase local ownership. The project bulletins were produced by WFT and the staff of the Federation of Artisanal Fishermen, with between 300 and 1,000 copies distributed to project partners and at events and meetings. Poster-sized newsletters were posted in public places in all 6 municipalities. See Appendices G1 (September/October newsletter), G-2 (December 2005 newsletter, and G-3 (March newsletter).

Activity D.3 - Creation of other publicity material

From February 6 to 21, 2006, Stewart Lampe (WFT) spent two weeks in the PPA Project area, documenting project activities and outcomes to support the creation of project communications materials. See Appendix G-4 for the trip report, including quotations from PPA Project partners and representative photos.

Beacon Hill Communications Group was commissioned to produce a trifold brochure and a 20 page interim report in English and Portuguese (January to May). However, this activity was put on hold pending a revision of the Project's communication strategy and budget.

Activity D.4 - Communication group

The project was not able to form a permanent, interinstitutional communications group yet, due in part to a lack of Brazilian counterpart funding and in-kind support. However, the Federação, colônias and municipal partners began to support the production and distribution of the Project newsletter in this reporting period. In the next reporting period, we intend to actively seek institutional partners to support the Project newsletter and expand its distribution and effectiveness as part of a strategy to raise the profile of Project activities and issues that affect fishing communities and the São Francisco River.

Activity D.4 Ongoing training and support for Community Reporters

Community reporters, trained by the IDRC Rumos project, continue to be active project participants, some of them contributing to local media and the Project's community newsletter.

Many of the community reporters meet with others and share information at Project events, and between December 4 and 6, new community reporters from Beira Rio (group formed in August 2005 with training offered by participants of the sub-project 1 Community Reporters workshops—Activity 1.2.1) met with community

reporters in Ibiaí, Pirapora, and Barra do Guaicuí, in order to share experiences and learn from each other, as well as to strengthen regional connections between fishing communities. In Ibiaí, two community reporters who broadcast news relevant to the fishing community on their program, *Pescador das Notícias* (Fisher of the News) interviewed a representative of the group about their participation in the watershed model construction and presentation team. In Barra do Guaicuí, the group toured the local radio station and talked to two young radio hosts, one of whom participated in the community reporters training workshops. They were also taken on a guided tour of the community by veteran project participant and community reporter Seu Osmar. In Pirapora, the group met with 4 members (2 male, 2 female; all youth) of the Pirapora/Buritizeiro reporters group, along with José de Andrade (WFT) and EYA CIDA youth intern Camilo Cortes, who have been working with the group. See Figure 4 for photos of meetings (Sarah).



Figure 4: Community reporters meeting

The following topics of discussion were on the Pirapora meeting agenda: general reflections from each community reporter about the experience of working on a community newspaper; identification of the main challenges faced thus far; and a determination of what has been learned in the process thus far. Since the two groups have shared goals—the creation of a community newspaper—and are at similar stages in the preparation for their first edition, the discussion was considered to be a good opportunity to learn from each other by all involved. In February and March, support to Community Reporters in the Beira Rio group was provided by Sarah Bryce (WFT) and Daiana da Silva (Federation) and in the Pirapora group by José Andrade and Ana Thé (see also 1.2.1). Of the currently-active reporters, approximately 80% are youth (90% female, 10% male) and 20% are adults (50% male, 50% female). Project support of these activities will continue to promote public dialogue within and beyond the fishing communities about issues that are important to these groups.

Activity E.1 - Project organization meetings

A PPA Project team meeting was held on February 28, 2006 in Victoria with Erika de Castro and John Wojciechowski in attendance, along with WFT staff. A gender sensitization session was led by Elaine Ward and Penny Poole, with topics including WFT's commitment to gender equality, CIDA's policy on gender equality,

CIDA-Brazil Inland Fisheries Project's gender equality strategy, use of gender-neutral language, OECD gender equality tipsheets as one tool for implementation, and sexual harassment. The day ended with a CED presentation given by John, followed by brainstorming and briefings in anticipation of his upcoming mission to Brazil.

In Belo Horizonte on March 31, a planning meeting was facilitated by Joachim Carolsfeld and Alison Macnaughton for the PPA Project's scientific partners from UFMG, UFSCar, PUC-Minas and other institutions. The results from this meeting fed directly into the subsequent meetings held in April as part of the joint Annual Work Plan development process, and prior to the Steering Committee Meeting scheduled in June 2006.

Activity E.3 – On-going project management

Project management activities in Canada:

In order to co-ordinate project sustainability, a number of management activities were carried out in this reporting period. On October 28, 2005, Executive Director Penny Poole (WFT) organized a team-building session led by Howard Esbin, a strategic planning facilitator. Howard delivered a session for staff that led to closer and more efficient teamwork on the Brazil project, as well as identified areas for improvement on current processes (for instance, communication between PPA Project personnel in Brazil and home office staff). This session was followed by a second visioning meeting in November, which attracted a number of WFT partner organizations who later provided in-kind contributions to the PPA Project (for instance, hosting Brazilian visitors to Canada during the February technical mission on water management practices).

While Sarah Bryce and Alison Macnaughton (WFT) were in Victoria for two weeks in November, the PPA project team restructured reporting formats for the better management of short-term contractors, created new templates, and attempted to streamline field operations. Also, Penny Poole, Joachim Carolsfeld and Alison Macnaughton (WFT) participated in meetings with Fraser Basin Council and Ear to the Ground Planning Consultants in Vancouver on November 7, 2005, as well as a meeting in Victoria with Jack Littlepage and Pat Summers of UVic on November 10, 2005. These networking activities laid the groundwork for partnership development with a view to PPA Project sustainability.

Elaine Ward (WFT) managed contracts and administrative matters beginning in October when she commenced employment as a maternity leave replacement for Carmen Ross. She coordinated the inputs for the fifth semi-annual report to CIDA, and translations of appendices, plus administered fourteen consultant contracts. Elaine also worked with Penny Poole on the guidelines for consultants with respect to expense reports and timesheets. These were subsequently translated into Portuguese. Additionally, she supervised Stewart Lampe, the new administrative coordinator, and Karl Archer, the full-time bookkeeper (who replaced Hatsumi Nakagawa in February.)

From February 22 to March 7, 2006, Joachim Carolsfeld and Alison Macnaughton (WFT) organized and led the technical mission on water management. On March 16, Alison made a presentation about the PPA to the WFT Board, including its new Chair, the Honorable David Anderson (See Appendix G-5).

Project management activities in Brazil:

Canadian management assistance in Brazil entailed a number of missions of WFT staff. The PPA Project Manager, Joachim Carolsfeld, carried out two project management field trips (November to December 2005; and March to April 2006). The Field Coordinator – Brazil, Alison Macnaughton, completed three missions to the field (one which ended in October; November to December 2005; January to February 2006). Sarah Bryce, Field Support – Brazil, was responsible for environmental education and PPA assistance during her two field trips (one which ended in October; another from November 2005 to February 2006). Finally, Administrative Coordinator, Stewart Lampe, carried out one mission to the field in February 2006, focusing on communications.

Numerous planning meetings occurred in January between WFT staff and consultants, as well as project partners, in which proposed project activities and partners' plans for the upcoming year were discussed. Subsequently, revised proposals for counterpart funding were submitted in February to funding agencies, in the areas of environmental education and habitat restoration.

In June 2006, a Steering Committee meeting was organized in Brasilia, with representatives of CIDA, ABC, WFT, UFSCar and other Brazilian partners and consultants. Project progress and impacts to date were presented and discussed, as well as operational challenges such as lack of Brazilian counterpart funding and the reorganization of activities and expenses paid by Canadian sources. The draft work plan for 2006-2007, that reflects these issues, was presented and accepted.

E.3 - Participation in courses related to project monitoring

Alison Macnaughton attended a Results Based Management Conference in Toronto from November 16 to 18, See Appendix G-6 for the symposium report.

From December 7 to 9, Ana Thé (WFT and Unimontes), Barbara Johnsen (WFT) and Alison Macnaughton (WFT) participated in an IDRC-sponsored course on outcome mapping in Montevideo, Uruguay and subsequently discussed ways to implement monitoring strategies for the Project. See Appendix G-7 for the Outcome Mapping Training Workshop report.

Activity E.4 - Institutional-strengthening (November 2005 to February 2006)

Institutional strengthening of the Federation, *Colônias* and other community organizations continued in this reporting period – particularly with respect to organization of community economic development activities, public expression of environmental concerns, and management contributions. Institutional strengthening was also evident at the municipal and regional level, with proposals and policies about education and sustainable environment substantially improved in Três Marias and the COMLAGO region.

Please also see Activities 2.2. and 2.2.4, related to the Canadian social scientist and network building, including strengthening local NGOs and municipal governments.

Outputs for Communications and Management:

Short-term results for Activity D: Greater local awareness of the Project and of issues that are relevant to fishing communities. Training of new community reporters. Strengthening of new networks between communities through exchanges between community reporters and between community groups (Regional CED council).

Short-term results for Activity E: Greater gender sensitivity by WFT staff and more complete understanding of policies and programs relevant to gender. Effective project management with a focus on gender and the involvement of women in community economic development strategies. Greater local engagement in project management. Effective coordination of project activities and strengthened communication between partners at local and state levels. Project activities implemented with participation from a wide variety of local partners, in addition to the managing partners. Conflict resolution and communications between community, government and industry strengthened through multi-stakeholder decision making processes

Outcomes for Communications and Management:

An estimate of how far we have moved towards the goal of sustainable, participatory management, including participatory performance of all CIDA-required reporting, is 50%.

Project Spin-Offs

Some project spin-offs include:

1. FEAM seminar on December 5 & 6 on investigating and determining the causes of fish mortalities.
2. Creation of the *Rede Cooperação*, coordinated by SEMEIA and with public-sector, private-sector and community participation (see Activity 3.4.4). In March, a partnership between VM and SEMEIA created a daily monitoring program of a large section of the São Francisco River in which dead fish were counted and recorded. It is hoped that the involvement of fishers will increase and the current activity will evolve into eventually becoming a wide-ranging and proactive environmental monitoring program.
3. Actions taken by the *Ministério Público* in response to the 2005 fish mortality, including the establishment of environmental restoration measures that must be undertaken by CEMIG, COPASA and VM. CEMIG signed an agreement with the *Ministério Público* agreeing to modify its Hydroelectric Plan to include environmental mitigation measures. The Três Marias Municipal Government and COPASA were required to commit themselves to implementing sewage treatment for the city by 2008. Among other remediation measures, VM will construct a third retention pond. See appendix G-8 for a summary of these agreements, prepared by the Communications Department of the *Ministério Público*.
4. Votorantim Metais publicly took responsibility for its past environmental damage and committed itself to fund environmental projects through *Termos de Ajusto de Conduto* (legal agreements that include new measures to be taken and financial and other compensation for past damages) signed with the *Ministério Público*, as well as funding other environmental initiatives in partnership with PMTM and other local partners. In March 2006, VM began a pilot river monitoring project, in which dead fish were documented by fishers. It is hoped that in the next reporting periods that this project will continue to become more participatory, involving a greater proportion of riverine residents and expanding its focus to environmental quality monitoring in a broader sense.
5. Joachim Carolsfeld (WFT) linked the Rotary Club of Edmonton with the Rotary Club International of Bayeux, Pernambuco, in Northeast Brazil. On January 15, 2006, the two Rotary Clubs donated 15 boats to the Association of Small-Scale Fishermen of Bayeaux, as part of the "Fishing Sustainability Project."

Variance of Activities Planned vs. Carried Out

The plan for activities in Reporting Period 6 continued mostly as indicated in the work plan, with the addition of a few activities not completed in the previous reporting period. Some activities that were amplified upon were activities on environmental education, youth, gender, and community monitoring/fish mortality, whereas the planned co-management conference did not come to fruition. Prioritization of activities was subject to deliberation of the management partners in November, creating an Action Plan for 2006, which was discussed at the participatory management meetings in April and presented to the Steering Committee in June.

A planned technical to Canada (Activity 2.22), scheduled for December and January, was postponed. Furthermore, an introductory week on alternate livelihoods (Activity 2.3.6) was postponed due to lack of preparedness and available time among partner municipalities. It has not yet been determined if this activity will be possible in the next reporting period, as it depends on counterpart support, due to a lack of available project funds.

Variance of Expenditure Forecasted vs. Actual

Overall expenditures for this reporting period are within that expected for the year. However, according to the Third and Fourth Quarterly Financial Reports for 2005/2006, there was consistent under spending on travel expenses in Canada and Brazil largely due to savings incurred on international flights and a reduction in per diem rates in the field. We had over-estimated our budgetary requirements for travel, but under-estimated our financial needs in the Canadian sub-contractor category and also for direct expenses in Canada and Brazil. The consistent over-expenditure in the former reflected higher than average activity levels this reporting period, while the consistent over-expenditure in the latter reflected high activity levels and some expense reports carried-over from the previous reporting period. By the end of the Fourth Quarter, we were \$13,854 overspent; however within 1% variance for the yearly budget.

Problems and Challenges

CIDA approval was required for hiring Brazilian short-term consultants. We hoped that this would be a transitional commitment as Brazilian-funded projects develop the follow-up of the CIDA project. In addition, CIDA assistance was required to attain Brazilian counterpart commitments to the Project, as well as developing follow-up and publicity.

Report on Gender Equity Strategy

Some specific gender strategies applied during this reporting period included: gender sensitization briefings with Project team members; ensuring that a gender perspective is incorporated into terms of reference and contracts for consultants; promoting gender mainstreaming into annual work plans with a view to poverty reduction; and generally, raising gender issues during various Project meetings.

The Project also recognizes the need to foster and assist the development and implementation of a gender strategy within all municipalities, one which adopts a gender-sensitive youth strategy as well. Therefore, the Project intends to carry-out additional activities designed to enhance and strengthen the gains from previous gender and CED workshops involving females---both adult women and youth---as well as to look for opportunities to strengthen local and regional linkages and gender networks advancing their collective interests. Activities for the final year of the Project will include a survey of key agencies and capacity-building for women and youth related to CED, for instance marketing and cooperatives.

Other gender strategies to be adopted in 2006/2007 include: involving civil society organizations in dialogue on gender-sensitive objectives and activities; providing in-country social and gender analysis expertise where feasible; jointly assessing and strengthening our partners' capacities for gender responsive and participatory gender analysis, planning and implementation; incorporating specific gender equality objectives into sub-project goals; ensuring sufficient resources and time are allocated for fieldwork during the design stage, in particular; utilize gender-sensitive monitoring and evaluation processes.

As regards the Project's approach to strengthening gender equality, it will continue to seek out women's organizations working in the Project area, along the São Francisco River, and at the state and federal levels. It will also continue to strengthen women's leadership capacity at every opportunity using participatory strategies. In the next reporting period, some activities will target fisherwomen specifically; the Project will also continue to work with fishermen to promote equality for females within their fishing communities ---adult women and youth alike.

Key Lessons Learned During Reporting Period

Recognition for government and other local partner agencies as key leaders and Project champions continued to grow in the project during the current reporting period. Project management activities focused on identifying and matching these partners to their key areas of interest within the project. The partners increasingly assumed leading roles in project-related regional forums and networks, for example the Rede Cooperação (SEMEIA), GT Pesca (IEF and the Colônias of Buritizeiro and Ibiaí), with WFT moving to a supporting role. The high level of interest expressed by the communities involved in these groups, coupled with the institutional commitments and personal investments of key institutional representatives in regular meetings of these groups is a significant indicator of their sustainability beyond the end of the Project.

With respect to the issues dealt with by the new networks and forums, we have found that opportunities for conflict management emerge when polarized groups can be encouraged to re-focus their dialogue around solving specific technical problems and issues of common concern, rather than entrenched blame-oriented positions. On-going discussion forums, when well-managed, can promote trust building and development of personal relationships, ideally leading to leverage and more empathetic decision making within institutions.

Areas Requiring CIDA Action or Approval in Near Future

With CIDA's permission, we will need to do a budget revision for the fourth and final year of the Project, in order to reflect the accurate amounts required for increased costs for WFT personnel in Canada and Brazil and hence increased indirect costs; decreased projected costs for travel in Canada and Brazil; and increased projected costs for Canadian (and Brazilian) subcontractors, as well as direct expenses in Canada and Brazil. We also need to recognize that the Brazilian counterpart funding committed at the beginning of the Project will not be available. Once the Annual Work Plan and Budget has been approved by CIDA, we will initiate a budget revision which will reflect more accurately the financial requirements to see the Project through to completion.

Planned Missions To and From Brazil³

The most immediate foreseen missions to and from Brazil include:

- **Érida F. de Araújo Silva and Marcos Gomes** - technical visit to Canada – Victoria and Winnipeg (May 1 – 20)
- **Elaine Ward (WFT) and Erika de Castro (consultant)** - gender and community development mission (May 13 – 28)
- **José Andrade, Debora Aparecida Antunes Pereira, Danielle Epifania Ferreira, Gislâne Maria Ribeiro Leite and Daiana da Silva (youth)** - study tour to Canada - Victoria and World Youth Forum in Vancouver (June 2006)
- **Erika de Castro (consultant)** – CED and gender mission (August – September 2006)
- **Branden Beatty (Intern and Millenium Scholar)** – evaluative mission on PPA youth initiatives (August 7 to September 5, 2006)
- **Emerson Maurício de Almeida Alves (SAEE of Pirapora Municipality)** - technical visit to Canada on water treatment technology, sewage and residue solids, water quality, community planning and environmental education - Victoria, Vancouver and Toronto (September 15 to October 17, 2006)

**Appendix A – Results and Indicators for Activities Conducted
During the Reporting Period⁴**

⁴ activity titles and numbering from revised LFA

Appendix B – Schedule of Activities for Next Reporting Period

Appendix C – Sub-Project 1 Results

C-1 Workshop Brochure - *GTPesca* (Fisheries Working Group) inception workshop in Pirapora, November 23 - 25, 2005.

C-2 Workshop Proposal – *GTPesca* Inception Workshop by facilitator, Ana Thé (and Regina Cedeira).

C-3 Draft Statute – *GTPesca* – GRUPO DE TRABALHO DA PESCA na Bacia do Rio São Francisco em Minas Gerais, REGIMENTO (second draft).

C-4 Field Report – prepared by consultant, Ana Thé, for the month of March 2006.

C-5 Participants and Abstracts – 6th UFSCar Science Fair (*Jornada Científica*), October 14, 2005.

C-6 Evaluation Report – based on the November 26, 2005 meeting in Pirapora for the Rumos Project and prepared by Alison Macnaughton (WFT).

C-7 Final Project Report – prepared by Ana Thé and Maria Inês Mancuso of UFSCar, for the Rumos Project on Co-Management on the São Francisco, February 2006, and also containing proposed *GTPesca* Statute, report on *GTPesca* 1st workshop, abstracts of UFSCar students' research projects and copies of students' final reports.

Appendix D – Sub-Project 2 Results

D-1 Project summaries and meeting minutes – Três Marias, Barra do Guaicuí, Ibiaí and Buritizeiro community development groups.

D-2 Meeting Report - CPT Regional Census and Strategy Building Meeting held in Bom Jesus da Lapa from October 14 to 16, 2005, prepared by WFT consultant, Barbara Johnsen.

D-3 Draft Workplan – *Roadmap to an Integrated CED Strategic Plan: PPA Six Month Action Plan*, prepared by John Wojciechowski, WFT consultant, February 2006.

D-4 Workshop Report –, *Development of Value-Added Products from the Artisanal Fisheries in Três Marias and Ibiaí, MG, Brazil*, December 3 – 21, 2005, prepared by Dr. Stephen Price and Dr. Purnima Govindarajulu Price.

Appendix E – Sub-Project 3 Results

E-1 Summary – History of the *Rede* fish mortality investigations, prepared by Alison Macnaughton, February 9, 2006.

E-2 Presentation – FEAM recommendations for mitigating surubim mortality, December 13, 2005.

E-3 Presentation – *Diagnostico Preliminar de Contaminação Ambiental por Metais na Area de Influencia da VM na Bacia do Rio São Francisco, Região de Três Marias (MG)*, prepared by Dr. Antonio A. Mozeto and Erida F. de Araújo Silva, as part of the Water Quality Course II delivered under the auspices of the Environmental Chemistry Laboratory at UFSCar, November 18, 2005.

E-4 Technical Report – *Investigation into fish mortality on the São Francisco River, Minas Gerais, Brazil, September 17 to October 10, 2005*, prepared by Jeremy Hackett.

E-5 Technical Report - *Programa de Gestão Ambiental Visando a Recuperação do Rio São Francisco* (elaborado em funcao da mortandade dos surubins), prepared by Geraldo Eysink.

E-6 Presentation – Overview of the *Rede Cooperação* functions and activities, prepared by WFT, January 31, 2006.

E-7 Invitation - for the *Rede Cooperação* meetings held on November 18, 2005 and January 31, 2006.

E-8 Minutes – for the *Rede Cooperação* meetings of October 17, November 18, December 14, 2005, and January 30/31, 2006.

E-9 - Webpage - *Rede Cooperação's* website print-out.

E-10 Documents - *Rede Cooperação* vision statement and participants list.

E-11 Meeting Reports – various technical reports presented by SISEMA/FEAM/IGAM/IEF, Dr. J. Tundisi/IEGA/VM, Dr. L. Lima/UFGM, Dr. A. Mozeto/LBGA to *Rede Cooperação*.

E-12 Proposal – for a *Rede Cooperação* draft statute.

E-13 Presentations – a series of VM-sponsored power point presentations to *Rede Cooperação*.

E-14 Trip Report – technical mission to Canada on water management practices, by Roberto Carlos Rodrigues da Silva.

E-15 Presentation - power point presentation (revised from March 2005) given by Silvia Freedman Ruas Durães, December 2005. COMLAGO / Três Marias dam .

E-16 Presentation – power point presentation given by Roberto Carlos Rodrigues da Silva, SEMEIA, in January 2006.

Appendix F – Cross-Cutting Theme Results

F-1 Conference Brochure - Minas Gerais State Fisheries and Aquaculture Conference held in Ibirité MG on February 9 and 10, 2006.

F-2 Conference Report – gender conference in Salvador, Brazil, attended by Thais Madeira, WFT consultant.

F-3 Project List – Description and status of various Três Marias community projects.

F-4 Documents – Work Schedule for the Watershed Model Construction and Exposition, August 13 to October 17, 2005, plus an invitation to the construction workshops, the December timetable for a radio advertisement, and a newspaper announcement of activities.

F-5 Monthly Reports – environmental education field activities for October 13 to December 30, 2005, by WFT consultant, Barbara Johnsen.

F-6 Monthly Reports - environmental education and watershed model-related field activities for October, November and December 2005, by WFT consultant, Jason Lasuik.

F-7 Speaking Notes – for a talk entitled, *Brazilian and Canadian Experience – Watershed Models in Environmental Awareness*, by WFT consultant, Jason Lasuik.

F-8 Monthly Report – environmental education and watershed-model related field activities for March and April, 2006, by WFT consultant, for Jason Lasuik..

F-9 Draft Manual – for the construction of a watershed model, prepared by Jason Lasuik.

F-10 Brochure – promoting the XIV Technology Fair at IEBG School in Três Marias, November 18, 2005.

F-11 Invitations – watershed model launching events (November 7 in Três Marias, December 2 in Pirapora, and December 3, 2005 in Ibiai).

F-12 Booklet – script for demonstrating the watershed model, December 1, 2005.

F-13 Articles – a series of nine print media articles concerning the PPA project and its partners, the watershed model activities, and the fish mortality investigations and public hearings.

F-14 Invitation Letter and Teachers' Project Summary Reports – Pilot project reports from teachers participating in the environmental education workshops in October 2005

F-15 Workshop Report – Environmental Education Workshops held in October 3 to 4 and November 7 to 8, 2005, prepared by UFSCar Master's student, Tatiana Terasin de Lima.

F-16 Monthly Report – environmental education field activities, by WFT Consultant, Janet Strauss, March 2006.

F-17 Monthly Report – environmental education field activities, by WFT Consultant, Barbara Johnsen, March 2006.

F-18 Thesis Summary – *Gender Relationships between Fishermen and Fisherwomen along the Upper and Middle São Francisco River, Annex 2*, written by Ana Carolina Bichoffe, UFSCar student, December 2005.

F-19 Technical Report – A Strategy for Youth Engagement in Communities along the São Francisco River, by Susan Kurbis of the Environmental Youth Alliance.

F-20 Monthly Reports – youth-related field activities, by WFT consultant, Jos é Andrade for October and November 2005, and action plan, October 11 & 12, 2005.

F-21 Monthly Reports – *Activities for the Environmental Youth Alliance regarding the PPA youth engagement project, Minas Gerais, Brazil*, by EYA intern, Camilo Cortes , for October, November, December 2005, and January 2006.

F-22 Presentation – *Apresentação e Avaliação Global das Atividades de Educação Ambiental realizadas na cidade de Pirapora com os programas Agente Jovem (AJ) e Renascer e Pingo de Luz (RPL)*, by Jos é Andrade and Camilo Cortes - January 23, 2006.

F-23 Presentation – *Educação Socio-Ambiental com jovens do Programa Agente Jovem de Pirapora: Para que e para quem?*, by Jos é Andrade and Camilo Cortes, February 16, 2006.

F-24 Program and Report – on youth, CED and tourism, by the Secretary of Sports, Leisure and Tourism for the SGA municipality , February/March 2006.

Appendix G – Management and Spin-Off Results

- G-1 Project Newsletter**– PPA Project community bulletin for September/October 2005.
- G-2 Project Newsletter** – PPA Project community bulletin for December 2005.
- G-3 Project Newsletter** – PPA Project community bulletin for March 2006.
- G-4 Trip Report** – Technical Visit to Brazil, February 6 to 22, 2006, by Stewart Lampe (WFT).
- G-5 Presentation** – *Continental Fisheries of Brazil: Sustainable Livelihoods and Conservation*, given by Alison Macnaughton (WFT) to the Board of Directors, March 16, 2006.
- G-6 Symposium Report** – *Results Based Management: Are we there yet? Ever?*, workshop held from November 16 to 18, 2005 in Toronto, Canada. Attended by Alison Macnaughton
- G-7 Notes** – *Outcome Mapping Course*, Montevideo, Uruguay, December 7 to 9, 2005, taken by Alison Macnaughton and Barbara Johnsen (WFT).
- G-9 Media Release** – Summarizing legally-binding agreements to reduce impacts between Ministério Público and VM, CEMIG, and the Três Marias municipal government and COPASA.