

Project Lead	Project Description
<i>Fiscal Year 1999-2000</i>	
Gwich'in Tribal Council (GTC)	1. Community based involvement in the Mackenzie Valley Cumulative Impact Monitoring Program in the Gwich'in Settlement Area [separate from 1999 community consultations]
GTC	2. Georeferencing water quality monitoring data in the Gwich'in Settlement Area
<i>Fiscal Year 2000-2001</i>	
Environment Canada – Canadian Wildlife Service (CWS) and University of Northern British Columbia (UNBC)	3. Monitoring cumulative impacts of oil & gas development in the Delta using tundra swans as an indicator species
GTC and Gwich'in Renewable Resources Board (GRRB)	4. Community - Land Relationship Project re: Traditional Knowledge
<i>Fiscal Year 2001-2002</i>	
GNWT - Resources Wildlife and Economic Development (RWED) – former name for Environment & Natural Resources (ENR)	5. Vegetation Monitoring Manual
GNWT - RWED	6. Insect monitoring and identification
GNWT - RWED	7. Caribou Movements
Deh Cho First Nations (DCFN)	8. Development of work plan concerning the presence of contaminants and the general health of moose, woodland caribou, and fish in the Deh Cho
Gwich'in Renewable Resources Board	9. Peel River Fish Study
GTC – Gwich'in Land Administration (GLA)	10. Permanent sample plots (PSP's) on Gwich'in lands
<i>Fiscal Year 2002-2003</i>	
Department of Fisheries and Oceans (DFO)	11. Tariuq (Oceans) Program: community-based monitoring of marine and anadromous fish of the lower Mackenzie River and near-shore areas of Beaufort Sea
Environment Canada – CWS/UNBC	12. Monitoring cumulative impacts of oil & gas development in the Delta using tundra swans as an indicator species
Taiga Environmental Laboratory (DIAND)	13. Community capacity building – sampling, analysis & interpretation course
GNWT - RWED	14. Spatial distribution of trapper activity and observations in the South Slave region
GNWT - RWED	15. Wildlife health in the Sahtu: Developing community expertise
GNWT - RWED – Forest Management Division	16. Establishment of permanent sample plots (PSP's) for growth and yield, national forest inventory and cumulative impact monitoring in the Sahtu
DCFN and GNWT - RWED	17. Deh Cho youth ecology camp
GTC – GLA	18. Permanent sample plots (PSP's) on Gwich'in lands

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GRRB	19. Travaillant Lake Fish Movement Monitoring Study
GRRB	20. Peel River Fish Study
NWT Métis Nation (NWTMN)	21. Water quality sampling – Fort Resolution, Fort Smith & Hay River
Deline Uranium Team & Great Bear Lake Working Group	22. Deline Research & Monitoring – draft community-based research and monitoring plan for Great Bear Lake area, working with a community trainee
North Slave Métis Alliance (NSMA)	23. Geographic Information System environmental assessment and traditional knowledge study of the winter road
Dogrib Treaty 11 Council (former name of Tlicho Government)	24. Training opportunities for Dogrib Lands Protection department
Inuvialuit Game Council and Joint Secretariat	25. Wildlife monitoring course – background on monitoring, expectations and reporting, firearms and first aid certifications
Ecological Monitoring and Assessment Network (EMAN) – North	26. Pan-northern manual for water quality monitoring
<i>Fiscal Year 2003-2004</i>	
Environment Canada (NWRI)	27. Community Training in the Preparation of Reports on Contaminated Studies in Deh Cho Lakes
Canadian Wildlife Service	28. Evaluating cumulative effects of oil and gas development and other impacts in the Mackenzie Delta Region using tundra swans as an indicator species
Taiga Environmental Lab (DIAND)	29. Community Capacity Building – Sampling, Analysis and Interpretation (on-going mentorship program)
Water Resources (DIAND)	30. Water Quality Baseline Monitoring – Prairie Creek
GNWT-RWED	31. General Status Ranking of all Vascular Plants in the NWT
GNWT-RWED	32. Building Community Capacity for monitoring cumulative impacts for the Bathurst Caribou herd in the NWT
GNWT - RWED	33. Moose Monitoring in the North Slave Region
GNWT - RWED and Sahtu Renewable Resources Board	34. Community Based Monitoring of Wildlife Populations and Health in the Sahtu
Water Resources (DIAND) and Gwich'in Tribal Council	35. Peel River Water and Sediment Quality Reporting
Deh Cho First Nation and GNWT-RWED	36. Deh Cho Youth Ecology Camp
GNWT - RWED and DCFN and EC	37. Boreal Caribou Population Trend Monitoring in the Cameron Hills Area of the Deh Cho – Community Involvement
NWT Métis Nation	38. ArcView Training
Dogrib Treaty 11	39. Preparation for Implementation of the Tlicho Agreement and CIMP
North Slave Métis Alliance	40. Community Based Monitoring of Non-Permitted Cabins and Dwellings in the North Slave Region
Gwich'in Tribal Council	41. Implementation, Resources Management and Land Administration – Capacity Building

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<i>Fiscal Year 2004-2005</i>	
Department of Fisheries & Oceans	42. Beaufort Sea Under Ice Fish Study
Department of Fisheries & Oceans	43. Training of Tariaq community-based monitors for physical/chemical environmental sampling in support of ongoing fisheries monitoring
Environment Canada – National Water Research Institute	44. Community Training in the Winter Water Quality Surveys: a continuing Dehcho First Nations and National Water Research Institute partnership
GNWT – RWED	45. Enhancing the Small Mammal and Snowshoe Hare Surveys in the NWT's communities: Web portal and Video of standard protocols
GNWT – RWED	46. Trapper Training and Fire Ecology Program 2005
GNWT – RWED	47. Moose Population Monitoring
GNWT – RWED	48. Wolverine Harvest Monitoring and Population Health, Inuvik Region, NWT
GNWT – RWED	49. Caribou Collaring
Taiga Environmental Lab (DIAND) and Inuvialuit Joint Secretariat	50. Community Capacity Building – Sampling, Analysis and Interpretation (ongoing mentorship)
GNWT - RWED and Sahtu Renewable Resources Board and University of Saskatchewan	51. Community-Based Monitoring of Wildlife Populations and Health in the Sahtu
Gwich'in Tribal Council	52. Environmental Monitor Training
Deh Cho First Nations	53. 2005 Dehcho Youth Ecology Camp
North Slave Métis Alliance	54. NSMA Harvester's and Monitor's Resource Guide and Traditional Foods Cookbook
North Slave Métis Alliance	55. NSMA Capacity Building: Global Positioning System and Geographical Information Systems Training
NWT Metis Nation	56. Capacity building: ARCGIS training 2004-05
University of Saskatchewan	57. Using Hunter Observations and Ecological Knowledge Together With Science to Understand Past and Current Occurrence of Wildlife Diseases in the North
<i>Fiscal Year 2005-2006</i>	
Taiga Environmental Laboratory, INAC	58. Environmental technician-mentoring program providing hands-on experience and training at the Taiga Lab
Department of Fisheries & Oceans	59. Winter Flow Measurements of Streams Crossed by the MacKenzie Valley Winter Road
Department of Fisheries & Oceans	60. Watercourse Resources Database Development
Environment Canada	61. Printing of Northern Water Quality Manual – English and French
GNWT-Environment & Natural Resources (ENR) – formerly Resources, Wildlife & Economic Development	62. Moose Population Monitoring

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GNWT-ENR	63. Seasonal Range Use and Movement Patterns of Boreal Caribou in the Dehcho
GNWT-ENR	64. 2005/2006 Trapper/Hunter Training
GNWT-ENR	65. Boreal woodland caribou workshops in North Slave communities
GWNT – ENR	66. Monitoring of Wildlife Populations and Harvesting on Hunting Corridors
GWNT – ENR	67. Caribou Predation on the Bathurst winter range
GWNT – ENR	68. Boreal woodland caribou response to industrial activity in the Summit-Keela area, Sahtu Region, NT
GNWT-ENR	69. Community-based monitoring of wildlife populations and wildlife health through direct training and establishment of Wildlife Health Monitors in Colville Lake, Deline, and Fort Good Hope
Gwich'in Tribal Council	70. Training Sessions (4) for Environmental and Research Monitors
Gwich'in Tribal Council	71. Developing a monitoring program for moose, woodland caribou, grizzly bear populations in the Gwich'in Settlement Area
Gwich'in Renewable Resource Board	72. Arctic Red River and MacKenzie River Fish Study
Gwich'in Renewable Resources Board	73. Moose Aerial Survey in the Gwich'in Settlement Area
Gwich'in Social & Cultural Institute	74. Repatriating Gwich'in Traditional Knowledge from the Dene Mapping Project
Sahtu Renewable Resources Board	75. Sahtu-Specific Development Density Plan
West Point First Nation	76. GIS Training Courses
NT Metis Nation	77. Coordination of NT Metis Nation three monitoring projects
Fort Resolution Metis Council	78. Monitoring at the Pine Point Mine Site
Hay River Metis Council	79. Monitoring of Paramount Resources
<i>Fiscal Year 2006-2007</i>	
GNWT-Environment & Natural Resources (ENR)	80. Community-Based Monitoring of Wildlife Populations and Health in the Sahtu, 2006/2007
GNWT-ENR	81. Seasonal Range Use and Movement Patterns of Boreal Caribou in the Dehcho
GNWT-ENR	82. Determinations of Relationships between Wolves and Caribou using Stable Isotope Analysis
Arctic Borderlands Ecological Knowledge Society	83. Arctic Borderlands Community-Based Monitoring Program
Dehcho First Nation	84. Youth Winter Camp
Gwich'in Social & Cultural Institute	85. Phase II Dene Nation Mapping Project – Gwich'in Materials (2006-2007)
Northwest Territory Metis Nation	86. Field Monitoring and Training of Monitoring Staff
Sahtu Renewable Resources Board	87. Bosworth Creek Monitoring Project
William MacDonald School	88. Youth Winter and Fish Monitoring Camp
<i>Fiscal Year 2007-2008</i>	

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GNWT – Environment & Natural Resources	89. Seasonal Range Use and Movement Patterns of Boreal Caribou in the Dehcho
GNWT - ENR	90. Boreal Caribou Response to Industrial Activity in the Summit-Keele Area, Sahtu Region, NT
GNWT - ENR	91. Hunting, Trapping & Fire Effects Training
GNWT - ENR	92. Data Repatriation of NWT Plant Label and GIS Information from Canadian Museums
GNWT - ENR	93. Pulling Information Together on Key Biodiversity Indicators for NWT Ecozones – Workshop Participation
GNWT - ENR	94. Moose Monitoring in the North Slave Region
GNWT - ENR	95. Moose Population Monitoring in Dehcho
GNWT - ENR	96. Monitoring and Understanding Movement and Distribution of Bathurst Caribou
Akaiitcho Territory Government	97. Great Slave Lake Watershed Community Aquatic Research and Monitoring Program
Akaiitcho Territory Government	98. Water is Life Conference
Arctic Borderlands Ecological Knowledge Coop	99. Arctic Borderlands Community-Based Monitoring Program
Dehcho First Nations	100. Dehcho Traditional Cultural Camp
Gwich'in Renewable Resources Board	101. Photographic Baseline for Dolly Varden Habitat in NWT Rivers
Gwich'in Renewable Resources Board	102. Vittrekwa River Char – Habitat Equipment and Analysis
Ka'a'gee Tu First Nation	103. Cameron Hills Wildlife Monitoring
Liidlii Kue First Nation	104. Continuing Traditional Knowledge and Information Gathering
Liidlii Kue First Nation	105. Sustainable Harvesting Initiative
North Slave Metis Alliance	106. Development of Community Specific Indicators for Socioeconomic and Community Wellness for the NSMA Community
North Slave Metis Alliance	107. Repatriation of Métis Traditional Knowledge from the Dene Mapping Project
Northwest Territory Metis Nation	108. Little Buffalo River Water Quality Program
Pehdzeh Ki First Nation	109. Survey of Caribou Health and Monitoring in the Boreal Forest Region of Pehdzeh Ki Deh
Sahtu Renewable Resources Board	110. Bosworth Creek Monitoring Project
Sahtu Renewable Resources Board	111. Communities, Caribou and Climate Change: A Sahtu Region Traditional Knowledge Research and Monitoring Program
University of Calgary	112. Environmental Impact Assessment and Monitoring Guidelines for Differentiating National Variation from Development-related Impacts on Caribou
University of Saskatchewan	113. Development and Application of Methods to Monitor the Ecological Health of the South Nahanni Watershed
William McDonald School	114. Camp Akaiitcho - Fish Study
Yamózhá Kúé Society	115. Watching the Land: Traditional Knowledge and Cumulative Impact Monitoring Practitioners Workshop
<b>FISCAL YEAR 2008-2009</b>	
Arctic Borderlands Ecological Knowledge Coop	116. Arctic Borderlands Coop Community Based monitoring Program
Department of Fisheries & Oceans	117. Community-based Coastal Beaufort Sea Monitoring
Department of Fisheries & Oceans	118. Identification and description of spawning and over-wintering habitats of anadromous fish species in the Mackenzie Valley
GNWT – Environment & Natural Resources (ENR)	119. Modeling cumulative impacts on summer range of the Bathurst caribou herd: a demonstration project
GNWT – ENR	120. Hunting, Trapping & Fire Effects Training Proposal

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GNWT – ENR	121. Invasive Alien Plants Monitoring Protocols for NWT Communities
GNWT – ENR	122. Ecology of the muskox below the treeline in the Sahtu Settlement Area
GNWT – ENR	123. Moose Population Monitoring in the Dehcho
GNWT – ENR	124. Seasonal Range Use and Movement Patterns of Boreal Caribou in the Dehcho
GNWT – ENR	125. Boreal caribou response to industrial activity in the Summit-Keele area, Sahtu Region, NT
GNWT – ENR	126. Monitoring and understanding movement and distribution of Bathurst caribou
Golder Associates Ltd.	127. Climate Change in the Central Northwest Territories – A Paleolimnological Analysis
Gwich'in Renewable Resources Board	128. Gap analysis of research in the Gwich'in Settlement Area
Gwich'in Social & Cultural Institute	129. Phase III Dene Nation Mapping Project – Conservation of Gwich'in Materials (2008-2009)
North Slave Métis Alliance	130. North Slave Community Based Monitoring Integrating Traditional Knowledge & Science
Northwest Territory Métis Nation	131. Little buffalo River Water Quality Program
Sahtu Renewable Resource Board	132. Bosworth Creek Monitoring Project
Sahtu Renewable Resource Board	133. Communities and Caribou in the Sahtu Region
Sambaa K'e Dene Band	134. Woodland Caribou Research: Phase 3
University of Alberta	135. Inuit, Polar Bears and Conservation Hunting Project
University of Northern British Columbia	136. Fire-lichen dynamics and the influence of climate change
Wek'èezhii Renewable Resources Board	137. Using Tlicho knowledge to monitor cumulative impacts
Yamózhá Kúé Society	138. Our responsibility to keep the land alive: traditional knowledge and cumulative impact monitoring practitioners workshop
<b>FISCAL YEAR 2009-2010</b>	
Arctic Borderlands Ecological Knowledge Co-op	139. Arctic Borderlands co-op community-based monitoring program
Department of Fisheries and Oceans	140. Community-based coastal Arctic monitoring
Department of Fisheries and Oceans	141. Identification and description of spawning and overwintering habitats of anadromous coregonids in the Mackenzie Valley
Environment Canada	142. Community monitoring of the Great Slave Lake ecosystem: first steps.
GNWT-Environment & Natural Resources (ENR)	143. Moose population monitoring in the Dehcho
GNWT-ENR	144. Seasonal range use and movement patterns of Boreal caribou in the Dehcho
GNWT-ENR	145. Ecology of the muskox below treeline in the Sahtu Settlement Area
GNWT-ENR	146. Environment and Natural Resources North Slave Region Hunting, trapping and fire ecology program
Gwich'in Renewable Resources Board	147. Harvest data collection - Gwich'in Settlement Area

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Gwich'in Renewable Resources Board	148.Moose abundance and composition in the Gwich'in Settlement Area and Inuvialuit Settlement Region
Gwich'in Social and Cultural Institute	149.Gwich'in traditional knowledge monitoring: stewardship of Gwich'in lands through management of oral history/traditional knowledge data
North Slave Metis Alliance	150.Using traditional knowledge to assess past and current climate change in the south-central Northwest Territories
North Slave Metis Alliance	151.Integration of science and traditional knowledge in community based monitoring
Northwest Territory Metis Nation	152.Little Buffalo River water quality program
Parks Canada	153.Quantifying the cumulative effects of mining on the ecological health of rivers in the South Nahanni watershed
Sahtu Renewable Resources Board	154.Bosworth Creek Monitoring Project
Sahtu Renewable Resources Board	155.Digital storytelling as a tool for monitoring caribou and communities in the Sahtu region
Tlicho Lands Protection Department	156.Marian Lake Watershed Monitoring/Management Program
Wek'eezhii Renewable Resources Board	157.Policy and guidelines: Initial steps towards managing a community-based Tlicho Knowledge (TK) program for Wek'eezhii, Northwest Territories
<b>FISCAL YEAR 2010-11</b>	
Arctic Borderlands Ecological Knowledge Co-op	158.Arctic Borderlands Co-op Community Based Monitoring Program
Canadian Wildlife Service	159.Bird Monitoring in the Mackenzie Delta (Arctic PRISM Tier II Site)
Department of Fisheries and Oceans Canada	160.Hendrickson Island Beluga Research Program
Department of Fisheries and Oceans Canada	161.Community-based Coastal Arctic Monitoring
Department of Fisheries and Oceans Canada	162.Assessment of Critical Bull Trout Habitat in the South Nahanni Watershed
Dehcho First Nations	163.Developing a Community Based Aquatic Research and Monitoring Program
Dehcho First Nations	164.CABiN Training for the Dehcho Communities
Environment Canada	165.Community Monitoring of the Great Slave Lake Ecosystem: Second Steps
GNWT - ENR	166.Hunting, Trapping and Fire Ecology Program
GNWT – ENR	167.Moose Population Monitoring in the Dehcho
Gwich'in Tribal Council	168.Traditional Knowledge Workshops to Discuss and Gather Information with regard to permafrost disturbances and its effects on the land and water systems in the Richardson Mountains, NWT
Gwich'in Renewable Resources Board	169.Moose Abundance and Composition in the Gwich'in Settlement Area and Inuvialuit Settlement Region
Indian and Northern Affairs Canada (INAC) –former name of AANDC	170.Investigating the Effects of Overland Winter Access in the Outer Mackenzie Delta

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INAC/University of Ottawa	171.Evaluating catchment scale cumulative impacts: Mega-scale permafrost disturbances and their effects on terrestrial and aquatic systems in the Richardson Mountains, NWT
Inuvialuit Joint Secretariat	172.Community Monitoring of Vegetation and Permafrost in the Mackenzie Delta Region
Inuvialuit Joint Secretariat	173.Using Inuvialuit Observations to Monitor Change in the Mackenzie Delta Region
Northwest Territory Metis Nation/INAC	174.Slave River
Trent University	175.Understanding Impacts of Environmental Change on Char in the ISR: Science and Inuit Knowledge for Community Monitoring
University of Calgary	176.Moose and Caribou Health: Monitoring the Emergence and Impacts of Winter Tick in the Sahtu Settlement Region
Wek'eezhii Renewable Resources Board	177.Pilot Project: Using Tlicho Knowledge to Monitor Cumulative Impacts
<b>FISCAL YEAR 2011-12</b>	
GNWT – Environment & Natural Resources (ENR)	178.Vulnerability assessment for the Slave River and Slave River Delta and sediment core sampling to assess contaminant deposition to the Slave River Delta over time
Indian and Northern Affairs Canada (INAC) – former name of AANDC	179.The cumulative impacts of rapid environmental change in the northwestern NWT: Investigating the impacts of mega-slump disturbances on terrestrial and aquatic ecosystems in the lower Peel watershed, NWT
INAC	180.Community based environmental monitoring in the NWT
University of Victoria	181.Using Inuvialuit observations and remote sensing to monitor environmental change in the Mackenzie Delta Region
Ecology North	182.Water monitoring capacity building
Department of Fisheries & Oceans	183.The road to ecosystem redemption: Comparative study of degraded and pristine giant lakes of North America using Ecopath
University of Victoria	184.Evaluation of hydro-climatic drivers of contaminant transfer in aquatic food webs in the Husky Lakes Watershed (ISR, NWT)
Canadian Forest Service	185.Ecological monitoring in the Northwest Territories: a collaborative approach
Department of Fisheries & Oceans	186.Comparison and calibration of broad scale monitoring and NORDIC community index gill net protocols for NWT lakes
WRRB	187.Aquatic ecosystem monitoring project
Arctic Borderlands Ecological Knowledge Co-op	188.Arctic Borderlands Coop: Community based monitoring program
GNWT – Environment & Natural Resources	189.Landscape scale flooding in the Great Slave Lake Plain: Expansion of lakes, flooding of wetlands and implications to bison habitat
Environment Canada	190.Integrated vegetation monitoring protocol
K'agee Tu First Nation	191.CEMP baseline study

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INAC	192. Establishing standard monitoring stations in the North Slave
Dehcho First Nations	193. Developing a "Pathways" model for the Dehcho community-based research and monitoring program
Department of Fisheries & Oceans	194. Environmental baseline conditions of habitat and fish tissue at a proposed effluent discharge site, Yellowknife Bay, NWT
Environment Canada	195. Community monitoring of the Great Slave ecosystem: second steps
Department of Fisheries & Oceans	196. Harvest-based monitoring of western Beaufort Sea coastal fisheries
Dehcho First Nations	197. CABIN protocol training and stream assessment project
Department of Fisheries & Oceans	198. Biological monitoring and assessment of fish populations, with a focus on lake trout biology in Great Bear Lake
Department of Fisheries & Oceans	199. Impacts of climate change on contaminants in consumed fish
Department of Fisheries & Oceans	200. Community based monitoring of coastal fish ecology using biomarkers
Deline Renewable Resources Council	201. Community based water quality monitoring in Great Bear Lake
EC – Canadian Wildlife Services	202. Bird monitoring in the Mackenzie Delta (Arctic PRISM Tier II Site)
GNWT – Environment & Natural Resources	203. Wolf abundance and predation on caribou winter range
Tlicho Government	204. Capacity building for the Kwe Beh working group
Department of Fisheries & Oceans	205. Monitoring and assessing the cumulative impacts on important fish population productivity and community diversity in Great Slave Lake
Tlicho Government	206. Tlicho Knowledge research and monitoring program: baseline data and protocol development
Wilfred Laurier University	207. Evolution of the snowpack and snowmelt chemistry in the boreal forest and tundra ecosystem
University of Calgary	208. Moose and caribou health: monitoring the emergence and impacts of winter tick in the Sahtu Settlement Region
GNWT – ENR	209. Hunting, Trapping and Fire Ecology Program
CWS	210. Population trends of songbirds in the Fort Liard area
Trent University	211. Understanding impacts of environmental change on char in the ISR: Science and Inuit knowledge for community monitoring
INAC	212. Hay River water and suspended sediment quality - community sampling program
GNWT – ENR	213. Moose population monitoring in the Dehcho
Department of Fisheries & Oceans	214. Environmental conditions and beluga whale entrapment events in the Husky Lakes

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INAC	215. Investigating the effects of northern overland transportation infrastructure
Natural Resources Canada	216. Characterization of variability in permafrost thermal state, Mackenzie corridor NWT
Lutselk'e Dene First Nation	217. Cumulative impact monitoring in Thaidene Nene - Ni Hat'ni Dene program 2011-12
Gwich'in Social & Cultural Institute	218. Phase II Gwich'in Traditional Knowledge Monitoring: Stewardship of Gwich'in lands through management of oral history/traditional knowledge data
GRRB	219. Gwich'in Harvest Study
GNWT - ENR	220. Monitoring the Dehcho boreal caribou population
Aurora Research Institute	221. Monitoring Permafrost for Cumulative Impact Assessment in the Inuvialuit Settlement Region
<b>Fiscal Year 2012-2013</b>	
Aboriginal Affairs and Northern Development Canada (AANDC)	222. A multi-scale assessment of cumulative impacts in the Northern Mackenzie basin
AANDC	223. A watershed approach to monitoring cumulative impacts of landscape change
AANDC	224. Changing hydrology in the Taiga Shield: Geochemical and resource management implications
Arctic Borderlands Ecological Knowledge Co-op	225. Arctic Borderlands Co-op: Community based ecological and cumulative impacts and monitoring program
Canadian Centre for Remote Sensing	226. Baseline monitoring of Arctic vegetation and snow changes over the Bathurst caribou habitat using satellite remote sensing and community-based field observations
Department of Fisheries and Oceans (DFO)	227. The road to ecosystem redemption: Comparative study of degraded and pristine giant lakes of North America using Ecopath (2nd year)
DFO	228. Monitoring Pacific salmon to understand cumulative impacts of climate change in the Arctic
DFO	229. Community coastal based monitoring: A regional approach for the ISR
DFO	230. Winter ecosystem and fish habitat in the nearshore Beaufort Sea
DFO	231. Understanding adaptive mechanisms of fishery production and community diversity corresponding to environmental and cumulative impacts in Great Slave Lake systems
DFO	232. Long term monitoring of Great Bear Lake fisheries and the aquatic ecosystem
DFO	233. Impacts of climate change on contaminants in consumed fish

**Note:** This table is not a comprehensive listing of all NWT CIMP activities. Full reports of these listings are available through the NWT Discovery Portal at <http://nwt.discoveryportal.enr.gov.nt.ca/geportal/catalog/main/home.page>. Further information on these projects and on the NWT CIMP is available from Claire Marchildon, (867) 669-2894, e-mail [Claire.Marchildon@aandc.gc.ca](mailto:Claire.Marchildon@aandc.gc.ca) or on the NWT CIMP website at [www.nwtcimp.ca](http://www.nwtcimp.ca), e-mail [cimp@aandc.gc.ca](mailto:cimp@aandc.gc.ca).

Project Lead	Project Description
Environment Canada	234. Community and scientific monitoring of the Great Slave Lake ecosystem
Government of the Northwest Territories – Environment & Natural Resources (GNWT – ENR)	235. Boreal caribou monitoring in the Dehcho
GNWT – ENR	236. Wolf predation on Bathurst caribou
GNWT - ENR	237. Implementing an NWT approach to collaborative monitoring that addresses the needs of water partners, including community concerns and cumulative impacts
GNWT – ENR	238. Succession and regeneration response on seismic lines with respect to ecology, disturbance factors and time
GNWT – ENR	239. Furbearer contaminants, population and harvest on the Slave River and Slave River Delta: historical and current conditions
GNWT – ENR	240. Landscape scale flooding in the Great Slave Lake Plain: Expansion of lakes, flooding of wetlands and implications for bison habitat and local land users
GNWT – ENR	241. Hunting, Trapping and Fire Ecology Program
GNWT – Health and Social Services	242. Visual analysis of predictors for increased mercury levels in predatory fish in NWT lakes
Ka'a'gee Tu First Nation	243. Investigating the cumulative effects of environmental change and human activity in the Tathlina watershed
Lutsel K'e Dene First Nation	244. Ni Hat'ni Dene Program
Parks Canada	245. Quantifying the cumulative effects of industrial activities on the health of fish in rivers in the Northwest Territories
Tlicho Government	246. Tlicho community-based monitoring of the Bathurst and Bluenose East caribou
Tlicho Government	247. Using Tlicho Knowledge to monitor barren ground caribou
Trent University	248. Understanding impacts of environmental change on char in the ISR: Science and Inuit knowledge for community monitoring
University of Victoria	249. Monitoring environmental change in the Mackenzie Delta Region: Inuvialuit observations and participatory-multimedia mapping
Wilfrid Laurier University	250. Snowpack accumulation: influence on caribou distribution, surface water chemistry and lake productivity
Wek'eezhii Renewable Resources Board	251. Tlicho Aquatic ecosystem monitoring project
Yellowknives Dene First Nation	252. Establishing a water quality dataset for cumulative effects assessment in the North Slave

**Note:** This table is not a comprehensive listing of all NWT CIMP activities. Full reports of these listings are available through the NWT Discovery Portal at <http://nwt.discoveryportal.enr.gov.nt.ca/geoportal/catalog/main/home.page>. Further information on these projects and on the NWT CIMP is available from Claire Marchildon, (867) 669-2894, e-mail [Claire.Marchildon@aandc.gc.ca](mailto:Claire.Marchildon@aandc.gc.ca) or on the NWT CIMP website at [www.nwtcimp.ca](http://www.nwtcimp.ca), e-mail [cimp@aandc.gc.ca](mailto:cimp@aandc.gc.ca).

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Aboriginal Affairs and  
Northern Development Canada

Affaires autochtones et  
Développement du Nord Canada



# NWT CIMP

Northwest Territories Cumulative Impact Monitoring Program

Canada

# Northwest Territories Cumulative Impact Monitoring Program (CIMP)

## Strategic Plan to 2015

October, 2012





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# Introduction

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The Northwest Territories Cumulative Impact Monitoring Program (CIMP) is an environmental program that aims to support, facilitate and coordinate the collection, analysis, management and dissemination of information regarding the long-term state and health of the environment in the Northwest Territories, with the goal of supporting better resource management decision-making and sustainable development. A similar but independent program also exists in Nunavut called the Nunavut General Monitoring Plan (NGMP).

A coordinated, effective and rigorous environmental monitoring regime is critical for sustainable development in the Northwest Territories in order to:

- Understand and respond to changing environmental conditions at local, regional and territorial scales;
- Understand, assess and mitigate the potential cumulative impacts of resource development activities on the environment;
- Improve the effectiveness and accountability of monitoring and resource management governance, policy development and land-use decision-making; and,
- Improve the coordination, alignment and integration of environmental research and monitoring information.

The development of a robust monitoring regime will provide significant benefits to northern communities, industry, planners, government and decision-makers; however, achieving it will require significant changes in how all of these parties prioritize monitoring and collaborate in the collection, analysis and dissemination of information. The CIMP will play a key role in championing and facilitating these activities.

This document presents the Strategic Plan for the CIMP that outlines the program's mandate, vision, governance, approach, goals, and milestones until 2015. A compatible plan has also been developed for NGMP. This plan will serve as key foundation for outreach and engagement with external partners, stakeholders and interested parties in the development of specific program elements, work plans and resources. The CIMP welcomes interested parties and stakeholders to join them in this important endeavour.

For more information, please contact:

The CIMP Secretariat  
[cimp@aandc-aadnc.gc.ca](mailto:cimp@aandc-aadnc.gc.ca)

# Mandate, Vision, and Outcomes

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## MANDATE

Environmental monitoring is a constitutional and statutory requirement in the Northwest Territories contained in the Sahtu, Gwich'in, and Tlicho land claim agreements and in Part 6 of the Mackenzie Valley Resource Management Act (MVRMA). Section 146 of the MVRMA indicates that:

*The responsible authority shall, subject to the regulations, analyze data collected by it, scientific data, traditional knowledge and other pertinent information for the purpose of monitoring the cumulative impact on the environment of concurrent and sequential uses of land and water and deposits of waste in the Mackenzie Valley.*

Although the MVRMA and its provisions relating to cumulative impact monitoring and environmental auditing does not apply to the Inuvialuit Settlement Region, AANDC and the Inuvialuit Game Council, with the support of the Working Group, agreed in April 2002 that the Inuvialuit Settlement Region would be included in the implementation plans for the NWT CIMP and Audit. A Memorandum of Understanding to this effect was signed in November 2003.

The Federal government has a clear mandate and responsibility for environmental monitoring in the NWT and announced funding for the CIMP in Budget 2010. AANDC is the lead Federal department for implementing the CIMP through its NWT regional office, with support from headquarters.

## VISION

The CIMP supports sustainable development in the NWT and AANDC's long-term strategic outcome: "Self-reliance, prosperity and well-being for the people and communities of the North". Its program-specific vision is "to watch and understand the land and use it respectfully forever".

## OUTCOMES

The CIMP has identified two key outcomes that are central to achieving its mandate and vision:

- (i) *standardized and consolidated environmental monitoring data and information, and*
- (ii) *an accessible monitoring knowledge base that informs and supports decision-making.*

# Context, Approach and Activities

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## CONTEXT

The need for cumulative impact monitoring is heightened in the context of rapidly increasing development pressures throughout the Northwest Territories. In particular, interest in mining has focused on diamonds in the eastern regions of the NWT, while oil and gas activities, including a proposed gas pipeline, are dominant in the west. As these pressures intensify, they are likely to contribute to cumulative environmental impacts. This reinforces the need to understand environmental baseline conditions against which to predict and assess change, how conditions are changing, the nature of the changes and why.

There are three general types of environmental monitoring information in the NWT:<sup>1</sup>

1. **Baseline Monitoring:** Monitoring to determine the state of the environment and its natural variability. This monitoring is used to establish background or “baseline” levels of physical and chemical parameters against which environmental changes can be measured. This can be accomplished by long-term and/or survey monitoring at locations that are least developed or ideally “non-impacted” by human disturbance. This monitoring is often conducted by governments using both scientific and traditional knowledge.
2. **Effects Monitoring:** Monitoring to determine changes to the status and trend of specific environmental attributes or indicators (e.g. caribou). Effects monitoring may be project-based or cumulative and focuses on changes to the environment resulting from human activities. Effects monitoring information is often conducted by governments or industry proponents and informed by traditional knowledge holders.
3. **Compliance Monitoring:** Monitoring to determine whether a facility/operation is in compliance with licensing and permitting conditions. Compliance monitoring is used to detect and correct violations and provide evidence to support enforcement actions. Regulations and conditions are informed by what is known about the environment from long-term and effects monitoring. This monitoring is generally prescribed by regulators and delivered by proponents.

Monitoring in the NWT is faced with a number of challenges in terms of the effective collection, analysis and sharing of environmental monitoring information across all three types of monitoring. Significant information gaps related to the state and health of the NWT environments remain and decision-makers and residents have limited access to the information they need for integrated resource management.

This current state is illustrated in Figure 1A below. The three types of monitoring are depicted as operating in independent spheres with limited interaction among them. Cumulative effects assessment is not currently integrated into most monitoring efforts and is therefore positioned apart from the three spheres. The lack of compatible protocols, data and information makes data integration and analysis

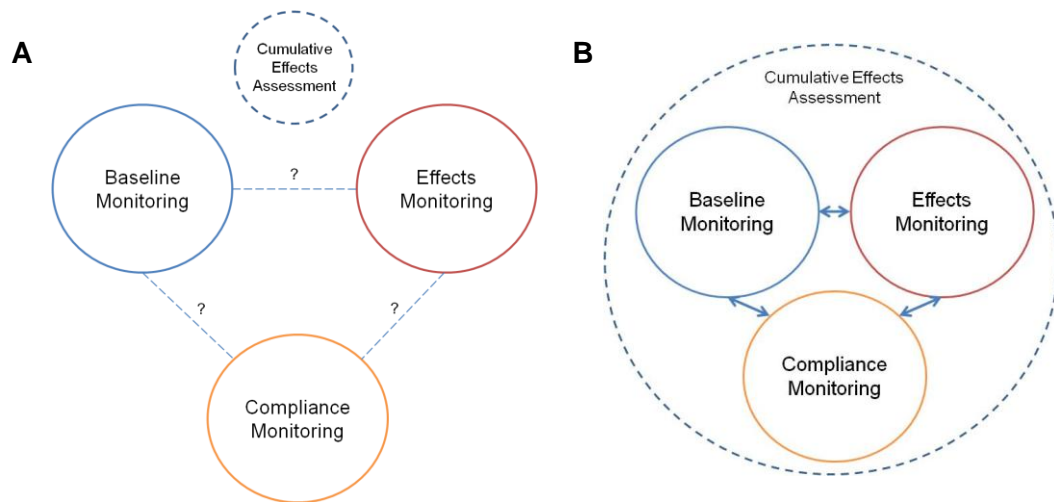
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<sup>1</sup> Descriptions are adapted from the Alberta Environmental Monitoring Panel’s 2011 report “A World Class Environmental Monitoring, Evaluation and Reporting System for Alberta”.

challenging and as a result it is difficult to look beyond project-specific impacts to assess the cumulative impacts of development.

One of CIMP's key goals is to develop and maintain a network of collaborators who will work to coordinate and integrate monitoring efforts. This network will develop and implement shared protocols for designing monitoring programs, collecting and sharing data, conducting analyses and reporting on their findings, the state of the environment, and the cumulative impacts of development. This vision is depicted graphically in Figure 1B below. The three spheres are more closely aligned and connected, and the assessment of cumulative effects is enabled by more integrated and compatible data and information.

**Figure 1: Representation of Current (A) and Desired (B) Monitoring Efforts**

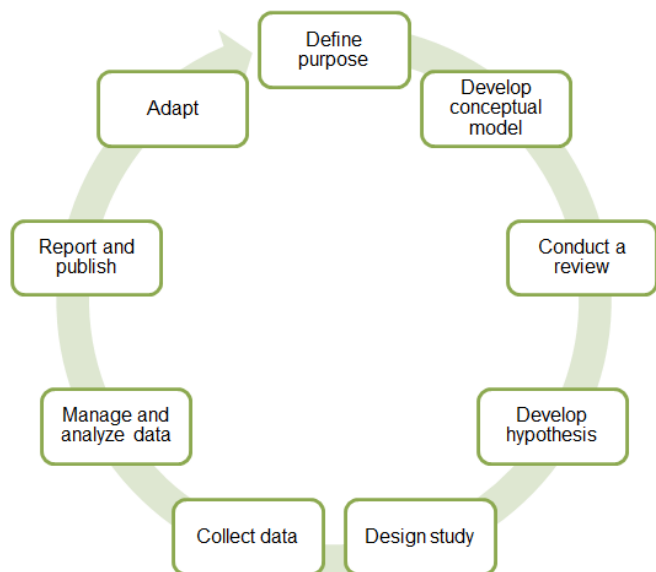


## THE PATHWAYS APPROACH

The CIMP proposes the Pathways Approach as a common platform for developing monitoring programs and protocols for baseline, effects and compliance monitoring in the NWT. The approach is designed to bring coherence and consistency to monitoring initiatives and to ensure involvement of northerners and decision-makers.

The Pathways Approach is an adaptive monitoring approach. Adaptive monitoring is structured to test a question, whose answer is required to improve decision-making and is adapted and refocused over time. Figure 2 depicts the key steps of the approach from defining the monitoring purpose and developing the conceptual model through to reporting and adapting the approach based on the key findings.

**Figure 2: The Pathways Approach**



# ACTIVITIES

To achieve its mandate and vision, the CIMP will be active in four main activity areas:

## 1. **Facilitating governance and partnerships**

In this capacity, the program will guide and support partnerships that involve collaboration among diverse partners including communities, government, claimant groups, industry, co-management boards and various experts and advisors to align, coordinate and integrate environmental monitoring objectives and activities. This includes establishing governance structures and formalizing collaborative activities through negotiating agreements, such as Memorandums of Understanding (MOUs), with key decision-makers and information providers.

The CIMP will also convene stakeholders and decision-makers from all three spheres of monitoring to validate its Valued Component (VC) framework and establish a set of shared questions and priorities for cumulative effects monitoring and related VC areas. This will be accomplished through a decision-makers' workshop as well as regular CIMP governance activities. Priorities will be captured in a published Monitoring Blueprint that will guide CIMP's activities and funding. Through this process, monitoring priorities will be defined by decision-makers, with monitoring being designed and delivered by experts and community-based organizations.

## 2. **Supporting, facilitating and coordinating the collection, analysis and synthesis of information regarding the long-term state and health of the ecosystem and socio-economic environment in the NWT**

This involves working with diverse information providers to establish baseline information and adopt shared monitoring protocols. The CIMP will convene information providers and subject matter experts to identify and/or develop shared monitoring protocols for i) the monitoring of cumulative effects related to priority questions, and ii) the long-term monitoring of priority VC areas to improve data quality and compatibility and to support cumulative effects assessment. This process will integrate scientific, traditional knowledge and community-based monitoring approaches. The core of the process will be a series of workshops focused on specific questions and VC areas.

For cumulative effects questions, the CIMP will play a significant leadership role in both guiding and funding research efforts. For long-term monitoring activities, the CIMP will co-develop and facilitate a process to come to agreement on a conceptual model and compatible monitoring methodologies for each priority VC.

The CIMP will also provide targeted funding for cumulative effects data collection and analysis and for related training and capacity building for community-based monitoring activities. This will be delivered through an annual request for proposals (RFP) process based on the Monitoring Blueprint priorities.

## 3. **Developing and maintaining an information management system**

The CIMP will work to improve data compatibility, accessibility and analysis by developing and maintaining a centralized, online information management system (IMS). The CIMP will work with its collaborators to consolidate information and analysis from diverse sources and make it accessible through the IMS.



#### **4. Reporting and communicating**

This involves disseminating information to decision-makers and the general public by developing and distributing reports and publications. The CIMP will produce a comprehensive State of the Environment report every five years, as well as an annual Summary of Knowledge report. These reports will address environmental changes and trends as well as cumulative effects. The CIMP will also engage with researchers and decision-makers to ensure that monitoring information is available to inform decision-making.

# Goals, Objectives and Milestones

## GOALS

The table below presents the CIMP's five-year program goals by activity area. These were jointly developed with NGMP and reflect the high degree of collaboration between the two programs.

**Table 1: Five-Year Program Goals**

Activity Area	Five-Year Goals
<b>Facilitate governance and partnerships</b>	<ol style="list-style-type: none"><li>1. Governance and management structures are established and functioning effectively.</li><li>2. Monitoring networks are formally established and functioning effectively.</li><li>3. Key monitoring questions and priorities are identified and adopted.</li></ol>
<b>Support the collection, analysis and synthesis of information</b>	<ol style="list-style-type: none"><li>4. Protocols for monitoring and analyzing data have been developed and tested for key priorities, questions and Valued Component areas.</li><li>5. Baseline information has been established for all priority Valued Component areas.</li><li>6. Funding is distributed annually to priority monitoring initiatives that build community capacity and fill key knowledge gaps.</li></ol>
<b>Develop and maintain an information management system</b>	<ol style="list-style-type: none"><li>7. Environmental monitoring information is centrally accessible online through an information management system.</li></ol>
<b>Report and communicate</b>	<ol style="list-style-type: none"><li>8. Key information on environmental monitoring is reported annually and contributes to the quality and timeliness of management decisions.</li></ol>

## OBJECTIVES & MILESTONES

Goal 1: Governance and management structures are established and functioning effectively

### Key Objectives:

- Update the terms of reference and membership of program governance structures
- Staff and operate the CIMP Secretariat
- Develop a performance measurement and evaluation system for implementation of the program
- Establish an internal federal advisory committee
- Develop and establish annual and five-year meeting and planning cycles

### Key Milestones:

2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
<ul style="list-style-type: none"> <li>Hire the secretariat and monitoring technical staff</li> </ul>	<ul style="list-style-type: none"> <li>Complete ToR</li> <li>Develop and implement strategic and work plans</li> <li>Monitor and report on program performance</li> <li>Establish key advisory groups to support program planning, funding allocations, monitoring design and reporting</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly meetings of Working Group</li> <li>Develop and implement strategic and work plans</li> <li>Continue to establish key advisory groups</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly meetings of Working Group</li> <li>Develop and implement strategic and work plans</li> <li>Develop MCs, TB and other program development submissions</li> <li>Independent program evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly meetings of Working Group</li> <li>Develop and implement strategic and work plans</li> </ul>

Goal 2: Monitoring networks are formally established and functioning effectively

#### Key Objectives:

- Develop and implement stakeholder communications and engagement plans
- Develop and establish Memorandums of Understanding (MOUs) to solidify partnerships (to outline agreed approaches for establishing protocols, determining monitoring priorities, sharing information and reporting)

#### Key Milestones:

2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
<ul style="list-style-type: none"> <li>Develop draft communication plan</li> <li>Release NWT Audit and Status of the Environment Report</li> <li>Engagement &amp; outreach activities (presentation &amp; consultation)</li> </ul>	<ul style="list-style-type: none"> <li>Develop plan</li> <li>Develop materials and activities that will provide information on the CIMP, and provide opportunities for engagement on key tasks and activities</li> <li>Develop MOU templates</li> </ul>	<ul style="list-style-type: none"> <li>Revise and update materials as needed</li> <li>Establish MOUs with key partners</li> <li>Assess partnership arrangements and adapt as needed</li> </ul>	<ul style="list-style-type: none"> <li>Continue to review and update materials as needed</li> <li>Continue to establish MOUs with key partners</li> <li>Continue to assess and adapt partnership arrangements</li> </ul>	<ul style="list-style-type: none"> <li>Continue to review and update materials as needed</li> <li>Complete establishment of MOUs with all key partners</li> <li>Review partnership arrangements and develop plan for next five-year cycle</li> </ul>

Goal 3: Key monitoring questions and priorities are identified and adopted

#### Key Objectives:

- Conduct annual decision-makers needs assessment and workshop to identify priorities and questions
- In collaboration with the NGMP, develop and update a Monitoring Blueprint that articulates a set of five-year priorities and questions to guide the CIMP's activities and distribution of funding

#### Key Milestones:

2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
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<ul style="list-style-type: none"> <li>• Modernize &amp; release request for proposal process (RFP)</li> </ul>	<ul style="list-style-type: none"> <li>• Develop process for ongoing assessment of decision-maker needs</li> <li>• Organize and deliver decision-maker workshop</li> </ul>	<ul style="list-style-type: none"> <li>• Develop Monitoring Blueprint</li> <li>• Develop specific monitoring plans to achieve priorities</li> </ul>	<ul style="list-style-type: none"> <li>• Update Monitoring Blueprint on an annual basis</li> <li>• Develop specific monitoring plans to achieve priorities</li> </ul>	<ul style="list-style-type: none"> <li>• Update Monitoring Blueprint on an annual basis</li> <li>• Develop specific monitoring plans to achieve priorities</li> <li>• Develop plan for decision-maker engagement in next Five-Year cycle</li> </ul>
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Goal 4: Protocols for monitoring and analyzing data have been developed and tested for key priorities, questions and Valued Component (VC) areas

#### Key Objectives:

- Engage collaborators (e.g. through workshops, meetings, events) to develop and/or adopt shared monitoring protocols for priority questions and VC areas
- Support the development and implementation of monitoring plans and guidelines

#### Key Milestones:

2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
<ul style="list-style-type: none"> <li>• RFP process focus on development of protocols</li> <li>• Consult on the need for common protocols</li> </ul>	<ul style="list-style-type: none"> <li>• Finalize joint methodology on protocol development; develop communication plan around monitoring protocols</li> <li>• Design and deliver monitoring workshops and training to partners and regulators (ongoing)</li> </ul>	<ul style="list-style-type: none"> <li>• Initiate development of protocols for priority VCs and questions</li> <li>• Design and deliver monitoring workshops and training to partners and regulators</li> <li>• Assist in implementing monitoring and capacity-building activities delivered by partners (ongoing)</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to develop protocols</li> <li>• Design and deliver monitoring workshops and training to partners and regulators</li> <li>• Assist in implementing monitoring and capacity-building activities delivered by partners</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt CIMP protocols for all VCs</li> <li>• Design and deliver monitoring workshops and training to partners and regulators</li> <li>• Assist in implementing monitoring and capacity-building activities delivered by partners</li> </ul>

Goal 5: Baseline information has been established for all priority Valued Component areas

#### Key Objectives:

- Coordinate design and implementation of monitoring programs to meet identified priorities
- Consolidate, analyze and synthesize information on environmental trends and cumulative impacts from diverse sources
- Communicate monitoring results

#### Key Milestones:

2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
<ul style="list-style-type: none"> <li>• Identify and initiate engagement with key collaborators</li> <li>• Production of 2010</li> </ul>	<ul style="list-style-type: none"> <li>• Assemble partners and design the monitoring plans, using the pathways approach*</li> </ul>	<ul style="list-style-type: none"> <li>• Assemble partners and design the monitoring plans, using the pathways</li> </ul>	<ul style="list-style-type: none"> <li>• Assemble partners and design the monitoring plans, using the pathways</li> </ul>	<ul style="list-style-type: none"> <li>• Assemble partners and design the monitoring plans, using the pathways</li> </ul>

NWT Environmental Audit & Status of Environment Report	<ul style="list-style-type: none"> <li>Identify and initiate engagement with key collaborators</li> <li>Organize and deliver CIMP workshop</li> <li>Publish information via IM/IT (i.e., Discovery Portal) – see Goal 8</li> </ul>	approach <ul style="list-style-type: none"> <li>Engage with key collaborators</li> <li>Organize and deliver CIMP workshop</li> <li>Publish information via IM/IT (i.e., Discovery Portal) – see goal 8</li> </ul>	approach: <ul style="list-style-type: none"> <li>Engage with key collaborators</li> <li>Organize and deliver CIMP workshop</li> <li>Publish information via IM/IT (i.e., Discovery Portal) – see goal 8</li> </ul>	approach: <ul style="list-style-type: none"> <li>Engage with key collaborators</li> <li>Organize and deliver CIMP workshop</li> <li>Publish information via IM/IT (i.e., Discovery Portal) – see goal 8</li> </ul>
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\* Pathways approach: Define the purpose, Develop the conceptual model, Conduct a review of known information, Develop the hypothesis, Design the study, Collect data, Manage and analyze data, Report and publish findings, Adapt

Goal 6: Funding is distributed annually to priority monitoring initiatives that build community capacity and fill key knowledge gaps

#### Key Objectives:

- Direct, manage and administer an annual Request for Proposals (RFP) process to allocate funds to support monitoring activities, develop community capacity and address knowledge gaps

#### Key Milestones:

2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
<ul style="list-style-type: none"> <li>Fund monitoring &amp; research projects through RFP process</li> </ul>	<ul style="list-style-type: none"> <li>Develop priorities and allocate funding to projects that will address knowledge gaps, through a competitive RFP process (ongoing)</li> </ul>	<ul style="list-style-type: none"> <li>Develop priorities and allocate funding to projects that will address knowledge gaps, through a competitive RFP process</li> </ul>	<ul style="list-style-type: none"> <li>Develop priorities and allocate funding to projects that will address knowledge gaps, through a competitive RFP process</li> </ul>	<ul style="list-style-type: none"> <li>Develop priorities and allocate funding to projects that will address knowledge gaps, through a competitive RFP process</li> </ul>

Goal 7: Environmental monitoring information is centrally accessible online through an information Management system

#### Key Objectives:

Establish a fully functional information management system that is integrated with NGMP

#### Key Milestones:

2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
<ul style="list-style-type: none"> <li>Finalize the NWT Monitoring Portal and populate portal with monitoring information</li> </ul>	<ul style="list-style-type: none"> <li>Manage CIMP website / portal</li> <li>Design IMS, including concept, data standards, technological infrastructure, procedural and technological approaches /</li> </ul>	<ul style="list-style-type: none"> <li>Design IMS, including concept, data standards, technological infrastructure, procedural and technological approaches /</li> </ul>	<ul style="list-style-type: none"> <li>Pilot joint IMS with regional support staff and infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Implement IMS, train all clients and users, and establish data sharing connections with all key partners</li> </ul>

	methodology, implementation plan, migration plan for existing systems, budget for life-cycle	methodology, implementation plan, migration plan for existing systems, budget for life-cycle		
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**Goal 8: Key information on environmental monitoring is reported annually and contributes to the quality and timeliness of management decisions**

**Key Objectives:**

- Develop a communications and outreach plan, including a framework for periodic reporting
- Produce annual reports (e.g. Summary of Knowledge (SoK) report, program reports)
- Coordinate and develop a comprehensive State of the Environment (SoE) report every 5 years
- Manage and administer the NWT Environmental Audit every 5 years

**Key Milestones:**

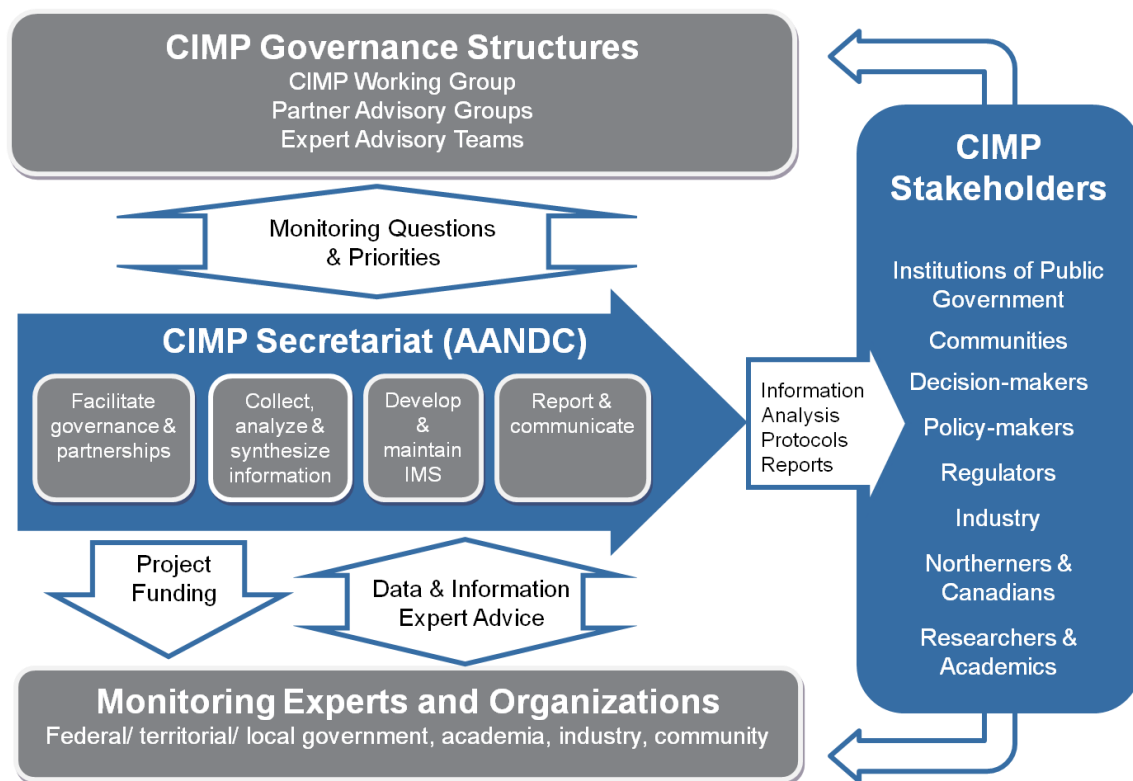
2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
<ul style="list-style-type: none"> <li>• Production of 2010 NWT Environmental Audit &amp; Status of Environment Report</li> </ul>	<ul style="list-style-type: none"> <li>• Develop plan in collaboration with NGMP</li> <li>• Revise “Summary of Knowledge” report format</li> <li>• Produce an annual CIMP report documenting program activities</li> <li>• Develop response to Audit recommendations and engage other organizations in their implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Update SoK reports, based on known information/ current understanding</li> <li>• Produce annual CIMP report</li> </ul>	<ul style="list-style-type: none"> <li>• Update SoK reports</li> <li>• Produce annual CIMP report documenting</li> <li>• Prepare for Environmental Audit</li> </ul>	<ul style="list-style-type: none"> <li>• Update SoK reports</li> <li>• Produce the comprehensive SoE report for the NWT</li> <li>• Conduct the NWT Environmental Audit</li> <li>• Produce annual CIMP report, including a report on the delivery of the Five-Year strategic plan</li> </ul>



# Governance

The CIMP governance model and approach, presented in Figure 3, illustrates the program’s role as a facilitator and coordinator of monitoring activities. Key monitoring questions and priorities are identified through the CIMP Working Group based on input from decision-makers and subject matter experts (Expert Advisory Teams and Partner Advisory Groups). The CIMP works with its network of monitoring experts and organizations to collect, analyze and report on cumulative impact monitoring information. This information is disseminated to stakeholders through the CIMP Secretariat, website and information management system.

**Figure 3: Overview of the CIMP Governance Model and Approach**



The key governance elements of the CIMP are:

## **CIMP Working Group**

The CIMP is governed by a Working Group that is comprised of members of regional Aboriginal, federal and territorial government representatives including the Government of Canada (represented by the AANDC NWT Regional Office), the Government of the Northwest Territories (represented by Environment and Natural Resources), Gwich'in Tribal Council, Tlicho Government, Inuvialuit Game Council, NWT Metis Nation, and the North Slave Metis Alliance.

Observers include the Sahtu Secretariat Incorporated, Dehcho First Nations, Akaitcho Territory Government, Environment Canada, Department of Fisheries

and Oceans, Parks Canada and the Mackenzie Valley Environmental Impact Review Board.

The Working Group provides high-level oversight for the CIMP and determines monitoring questions and priorities collaboratively with other stakeholders. It is envisioned that each Working Group member will represent and consult with its broader constituency on key decisions. For example, AANDC will establish and lead a Federal Advisory Committee in order to coordinate the input of federal government departments into the Working Group.

**Partner Advisory Groups**

Partner Advisory Groups will be established as needed and will comprise non-Working Group member organizations, such as non-governmental organizations, research institutions, academia and industry. These partners will provide insight and advice regarding the needs and priorities of organizations and constituencies that are not directly represented on the Working Group.

**CIMP Secretariat**

The CIMP Secretariat will be comprised of nine AANDC staff who will support the Working Group, manage the governance and partnership structures, guide information collection and reporting functions as well as support and conduct cumulative impact monitoring projects.

**Expert Advisory Teams**

Expert Advisory Teams will be organized as needed based on themes, Valued Components, indicators, monitoring questions and/or geographic focus areas. They will be comprised of subject matter experts and may include members from traditional knowledge holders, government departments, academia, industry, community members, or independent experts. Teams would include individuals with direct experience with or due regard for traditional knowledge. These teams will include representatives from the diverse organizations who will be providing monitoring information to CIMP. The teams will be managed by CIMP staff or partners.

# Stakeholder Engagement and Collaboration

The development and maintenance of meaningful partnerships is critical to the success of the CIMP. Key collaborators and stakeholders include:

- Co-management and regulatory bodies (e.g., Renewable resource boards in the Gwich'in, Sahtu, and Tłıchō regions, Environmental Impact Screening Committee, etc.)
- Aboriginal governments;
- Land and resource management and advisory organizations (e.g., Land Use Planning Boards, Land and Water Boards, Mackenzie River Basin Board, etc.);
- Federal government departments;
- Government of the Northwest Territories departments;
- Industry (e.g., mining, oil and gas, etc.);
- NWT communities;
- Environmental Non-Government Organizations (e.g., Canadian Arctic Resources Committee, Ecology North, Canadian Parks and Wilderness Society, World Wildlife Fund);
- Academic organizations (e.g., Universities and colleges); and,
- Other monitoring programs in the NWT, in neighbouring jurisdictions (e.g. Nunavut General Monitoring Plan, Alberta Forest Biodiversity Monitoring Program) and internationally (e.g., Arctic Council, Conservation of Arctic Flora and Fauna, Arctic Monitoring and Assessment Program ).

The CIMP will formalize key collaborative relationships with other partners and organizations through Memorandums of Understanding (MOUs). Many of these will be joint MOUs with the NGMP where partners are common to both regions. As the CIMP will have limited funding to support these activities, partners are encouraged to align and optimize their monitoring activities to their existing organizational mandates, and ultimately to the broader cumulative impacts monitoring mandate of the CIMP. Areas of partner collaboration will include, but not be limited to those highlighted in the table below.

**Table 2: Areas of Collaboration**

Area of Collaboration	CIMP Secretariat Role (AANDC)	Role of Monitoring Collaborators
<b>Governance Structures</b>	Establish and manage the governance and partnership structures. Coordinate and present Government of Canada positions on governance structures.	Participate in meetings and planning cycles and provide input and advice on strategic plans and other documents.
<b>Identification of monitoring questions and priorities</b>	Facilitate the identification of monitoring questions and priorities through workshops, questionnaires, meetings and information provision. Produce a Monitoring Blueprint that summarizes priorities and questions.	Participate in activities (e.g. workshops, meetings) to help identify key NWT monitoring questions, priorities and knowledge and capacity gaps.

Area of Collaboration	CIMP Secretariat Role (AANDC)	Role of Monitoring Collaborators
<b>Monitoring protocols for data collection, analysis and reporting</b>	Foster the identification and/or development of NWT wide compatible and standardized approaches to collecting, analyzing, and reporting on monitoring information.	Policy and technical staff participate in the identification, development, review and revision of monitoring protocols through online and in-person meetings. Commit to using the protocols in monitoring work (e.g., through internal policy and/or prescribing license conditions).
<b>Coordination and implementation of monitoring activities</b>	Coordinate and guide the design and implementation of monitoring programs to meet identified priorities.	Commit to align and coordinate monitoring priorities and activities with the shared priorities and questions of CIMP.
<b>Capacity building</b>	Support the capacity development of partners in pursuit of supporting the CIMP's mandate.	Champion the CIMP and provide support and ongoing capacity for the program to become operational within and across partner organizations.
<b>Quality and accessibility of information</b>	Design and maintain a centralized monitoring information management system that will link data sources and facilitate access to monitoring information.	Commit to i) adhering to shared and common data quality standards and protocols, ii) publishing information (data, reports, etc.) in an accessible and compatible format, and iii) making information available through the CIMP information management system.
<b>Reports and publications</b>	Report monitoring information to decision-makers and community members through Annual Summary of Knowledge and 5-Year State of the Environment Reports, as well as other documents (e.g., technical reports, newsletters).	Contribute to CIMP's Annual Summary of Knowledge and 5-Year State of the Environment Reports as subject matter experts, authors and/or technical reviewers. Contribute to and/or produce other relevant reports and documents.
<b>Annual Request for Proposals</b>	Direct, manage and administer the annual Request For Proposal process to fund monitoring activities that address key monitoring priorities and questions.	Support administration of RFP process (e.g. review of proposals). Apply for funding in partnership with communities to undertake monitoring initiatives that will contribute to the CIMP's objectives. Review monitoring project reports to ensure quality of data and methods.

# Sustaining Environmental Monitoring in the NWT

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The CIMP has a broad mandate for territory-wide monitoring of a wide range of Valued Components involving diverse community, industry, government and other partners. The following are key considerations for managing expectations and sustaining the success of the CIMP:

- **The CIMP's key role is to improve the coordination, alignment and accessibility of environmental monitoring activities.** AANDC is responsible for managing the program, but cannot directly conduct or fund all relevant comprehensive long-term monitoring activities itself.
- **The success of the CIMP is dependent on collaboration.** Communities, the federal government, territorial government and industry all have mandates and/or interest in environmental monitoring; the program is dependent on their active collaboration to collect, analyze and disseminate information. Effective, mutually beneficial partnerships are important given the high stakeholder expectations for the program, and the limited resources available to monitoring collaborators.
- **The CIMP has funding for specific, targeted monitoring activities.** Funding will be allocated by AANDC based on the recommendations of the CIMP Working Group and will focus on projects that address key monitoring questions and priorities and meet funding eligibility criteria.
- **The CIMP is an information provider, not a decision-maker.** The use of data and information reported through the program for decision-making purposes will be determined by the end-users. The CIMP will strive to maximize its relevance by engaging regularly with decision-makers and providing information that meets their needs.
- **CIMP will identify a subset of key monitoring questions, valued component areas, and geographic regions to focus on for these initial five years.** The program will also establish the structures, partnerships and systems needed for program management. Following this approach, it is anticipated that the subsequent five years of program development will focus on scaling up activities to encompass the program's full mandate.

The following strategies have been identified to ensure the CIMP's success:

- Proactively engaging collaborators to formalize relationships and integrate program considerations into business planning and operations;
- Assessing stakeholder and decision-maker needs early in the process;
- Focusing on priority questions, Valued Components and regions ("hotspots") for the first five years; and,
- Coordinating program activities to leverage resources and minimize demands on collaborators.

In the long run, the success of the program will depend on the ongoing engagement and support of collaborators, the effective management of internal and external expectations and the delivery of accessible, credible data and analysis to inform decision-making. The CIMP welcomes interested parties and stakeholders to join them in their efforts to support environmental monitoring and the sustainable development of the NWT.

# Appendix A: Valued Components

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## **CIMP Valued Components**

- Caribou
- Moose
- Land Mammals
- Marine Life
- Birds (land and marine)
- Water and Sediment Quality
- Water Quantity
- Air Quality
- Snow, Ground Ice, Permafrost
- Fish Habitat, Population, Harvest
- Fish Quality
- Vegetation
- Climate and Climate Change
- Human Health and Community Wellness



## Appendix B: Program History

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The CIMP received five years of dedicated program funding in the 2010 Federal Budget but has been in operation for the past 10 years. Since 1999, the program has made notable progress, including supporting monitoring projects, establishing a collaborative multi-stakeholder governance structure and developing a number of key documents, guidelines and models for program management and operations. The program has made notable progress in a number of areas related to environmental monitoring and program management.

### Valued Components (VCs) Monitoring

The CIMP successfully coordinated the NWT Environmental Audit in 2005 and in 2010. The 2005 audit generated significant findings related to land use planning; regulation, environmental impact assessment, traditional knowledge, and the cumulative impact monitoring program itself. It identified a number of cross-cutting themes and provided 50 recommendations to AANDC and other agencies to act on. The two recommendations related directly to the CIMP were (i) the need for a long-term stable funding source and (ii) the need to develop and implement a detailed, operational work plan which clearly identifies and addresses monitoring needs. Actions to address those CIMP-specific recommendations are currently underway. The CIMP is further involved in activities responding to cross-cutting themes and shared initiatives.

As of March 31, 2011, CIMP had supported and implemented more than 220 community monitoring projects and small-scale pilot projects that have yielded valuable baseline information while building community monitoring capacity. The CIMP promotes partnership approaches and the majority of the funded projects represent collaborative efforts between Aboriginal partners, governments and academia.

### Program Management

The CIMP has paved the path to a broad acceptance of the need for cumulative impact monitoring in the NWT. This has been accomplished through communication and outreach activities conducted by the program.

The CIMP has also been successful at establishing a governance structure that includes a multi-party Working Group and a series of Valued Component Expert Advisory Committees. This collaborative, multi-stakeholder structure has been successfully managed and maintained for numerous years despite the lack of secure program funding and has generated significant commitment and goodwill from all of the key stakeholder groups. With the support of the CIMP secretariat within AANDC, the Working Group has been focused on the high-level design and guidance of the NWT CIMP and Environmental Audit, and on regional and community consultations related to this work.

Considerable efforts have been invested into program planning over the years including:

- The development of a discussion paper on the NWT Cumulative Effects Assessment and Management Framework (CEAMF, now called the NWT Environmental Stewardship Framework), focussing on the state of environmental management in the NWT and identifying gaps and overlaps;
- An information management workshop in support of the NWT Cumulative Effects Assessment & Management Framework and the Mackenzie Valley Cumulative Impact Monitoring Program;

- The development of a “Draft Blueprint for implementing the cumulative effects assessment and management strategy and framework in the NWT and its regions”;
- A study on the integration of traditional knowledge into the cumulative effects assessment and management strategy and framework;
- Starting in 2004, annual revisions to the “Blueprint for implementing the cumulative effects assessment and management strategy and framework in the NWT and its regions”;
- The development of a “Plain language summary” of the Blueprint; and
- A “Thresholds: From Theory to Practice” Workshop. The workshop objectives were to provide an overview of threshold development and implementation, to share experience with the development and application of thresholds for use in environmental management in the NWT and in other jurisdictions, and to discuss the lessons learned from experience to date, implications for moving forward with the use of thresholds in the NWT, and possible ‘next steps’ in that regard.