

Rivers Institute at BCIT

2010-2011 Selected Articles



“Rivers are the arteries of our planet... they are our lifelines in the truest sense.”

Mark Angelo, Chair, Rivers Institute at BCIT



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An Eden where the river meets the sea

MARK HUME

VANCOUVER

From Tuesday's Globe and Mail

Last updated Monday, May. 16, 2011 7:16PM EDT



Chehalis pictograph of a sasquatch believed to be between 2,000 and 3,000 years old. (Mark Angelo/ The Globe and Mail)

Mark Angelo had been paddling for a month down the Fraser River and was aching for the comforts of home when he came around a bend just south of Hope. Suddenly his spirits lifted as the sky opened up over the great, glacial flood plain that is the Fraser Valley – and he found himself gaping in wonder.

Here, when the sun falls into the Pacific, the light angles up under the clouds, at times turning them as red as the flanks of spawning salmon. Along the shore, groves of ancient black cottonwoods line the banks, their leaves shimmering in the wind.

After the drama of Hell's Gate in the darkness of the Fraser canyon and the breathtaking sweep of the Cariboo-Chilcotin dry lands north of Lillooet, Mr. Angelo had not expected to be stunned by such wild beauty on the back doorstep of Metro Vancouver.

It was something he's never forgotten, and which today is driving his effort to try to save the lower river from the threats of development in the rapidly growing Lower Mainland.

"I was amazed," he says of his 1975 experience. "It was my first trip down the entire length of the Fraser ... and I just never anticipated finding what I think is the most beautiful stretch of the river, right there, where the river runs into the most heavily populated region in the province."

That trip convinced Mr. Angelo, chair of the Rivers Institute at the British Columbia Institute of Technology, that the Fraser is one of the world's great rivers, and no stretch is richer than the length through the Fraser Valley. "I call it the Heart of the Fraser," he said, reciting a title that has become a rallying point for a remarkable effort to save large sections of the river between Vancouver and Hope.

The Rivers Institute, Nature Trust of British Columbia, North Growth Foundation, Ducks Unlimited and others have been working together, lobbying governments for protective measures and raising funds to acquire key pieces of private lands.

Over the past few years, the Nature Trust has bought six pieces of property, including 201 hectares on the Chehalis River, 25 hectares in McGillivray Slough and 22 hectares at Harrison Knob, a hump of land near the confluence of the Harrison and Fraser Rivers where there are ancient burial grounds.

Ducks Unlimited has saved 125 hectares at Nicomen and Norrish Creeks, and together with the District of Mission and the Stave Lake Salmonid Enhancement Society, protected another 52 hectares at Silverdale Creek Estuary.

Mr. Angelo said he hopes Bristol Island, a popular fishing place near Hope, Mariah Slough, near Agassiz, and Stawberry Island, near Dewdney, can all be secured "for the next stages of the Heart of the Fraser project."

Those are just small pieces in the puzzle, however, and Mr. Angelo is hoping a long list of private and Crown lands can be set aside over the next several years.

"It would take tens of millions to get all the land that is needed," he said.

"That's a lot, but we've got a priority list and we are going after it a bit at a time."

Mr. Angelo said what's needed most, besides donations, is a method of getting all the different municipal, regional, provincial, federal and first nations governments together.

"The river runs through a lot of different jurisdictions and we desperately need a mechanism so that we can all work together collaboratively," he said. "Right now there are a lot of projects under way in a lot of different areas, but we need to somehow bring it all together."

In Metro Vancouver, the idea of neighbouring jurisdictions working in a shared forum on waste and transit issues is well established. Why can't all the government bodies from Hope to Metro Vancouver get together weekly or monthly to talk about saving one of the world's great rivers?

"Few places on Earth have such a rich, intact river system immediately adjacent to a major urban centre," said Mr. Angelo. "The Heart of the Fraser, with its complex system of islands, gravel bars and vegetation, supports an amazing array of life. ... A lot of people, if you ask them where B.C.'s single biggest salmon spawning run is, will say the Adams River. But it's not. It's the lower Fraser, where you get 20 million pink salmon spawning some years. I can go out there and paddle it on a weekend and see deer, bears, even cougars. Not enough people in Vancouver know what a remarkable, beautiful and wild place it is – but we're trying to change that."

Thirty-six years ago, Mr. Angelo paddled into the Heart of the Fraser for the first time, and fell in love with it. He says his dream now is to make sure his grandchildren have the same chance.

Published on Monday, May. 16, 2011 7:10PM EDT

Burnaby Now: the long walk for water

BY JENNIFER MOREAU, BURNABY NOW APRIL 13, 2011



Mark Angelo, chair of BCIT's Rivers Institute, with a group of Karo people in the Omo Valley of Ethiopia.

Photograph by: Contributed, BURNABY NOW

Mark Angelo will never look at water the same way after last summer in Ethiopia, Africa. The avid river conservationist was visiting Shivela, a village of about 100 Hamer people who live in wood-frame huts with no electricity and no running water.

Hamers are a long-isolated ethnic group from the Omo Valley in southern Ethiopia. They live in valley's foothills, far from the river. Their land is called the "poisoned paradise" - beautiful but arid, and it's a treacherous 15-kilometre trek to the nearest water source from Shivela.

One day, Angelo rose around 6 a.m. to join the women on their walk for water. It took three hours.

"We filled up our jerrycans and our calabash gourds. Everyone was carrying about 40 pounds each, and it took us four hours to get back. We didn't get back till one in the afternoon, and it's something they do every day," Angelo says. "When I got back, I was pretty exhausted, yet that was just the beginning of their day."

Upon return, the women started the rest of the chores - looking after animals and preparing meals.

But that journey marked Angelo. While water is a matter of life and death in the Omo Valley, it's readily available at BCIT, where he works as chair of the Rivers Institute.

"If I'm thirsty, I take my cup and walk across the hall, turn on a tap, and fill up my cup," he says. "It's something most North Americans don't think about. It's something we tend to take for granted, but we should never do that, because we are incredibly fortunate. Much of the world does not have that luxury."

In fact, close to one billion people worldwide do not have access to safe drinking water. Lack of accessible water and sanitization is a contributing factor to an early death in Shivela, where one is considered lucky to live past 50.

"It really makes you realize the importance of developing water wells," Angelo says.

"That was so apparent to me when I got back from this trek, I thought it would be a very positive thing to establish an event to profile this issue and hopefully raise some funds."

So Angelo organized Water for Life, a benefit set for April 7 at Burnaby's Michael J. Fox Theatre. The evening starts at 7:30 p.m. and features stories, images, film clips and music. Angelo is the featured speaker, joined by Holly Arntzen, Kevin Wright and the Dream Band with 160 singers from Brentwood Park Elementary. Global TV will be filming the show and airing it as a prime time special on June 25. Tickets are \$35 (plus fees), available through Ticketmaster, 1-855-985-5000. Proceeds go to the Nature Trust of B.C. and the African water relief efforts of WaterCan.

Angelo is focusing on the importance of water for the show.

"We need to be good water stewards, wherever we live. We are citizens of the planet," he says.

In Metro Vancouver, people use about 300 litres of water each day, and Canada has the world's second-highest rate of water consumption next to the United States. Compare that to the average person in the developing world who uses 10 litres per day for drinking, washing and cooking.

Water may be abundant in Canada, but that doesn't mean we are without issues, Angelo says.

"The water we get in B.C. is not distributed evenly," he says. "(There are) parts of the province where we are already seeing signs of water stress, where demand outstrips supply."

Okanagan and eastern Vancouver Island are examples, and there are more than 500 smaller communities under boil water advisories, he says.

In Burnaby, it's important to use water more efficiently to buy time before we have to spend hundreds of millions of dollars on expanding water storage capacity and infrastructure to meet the needs of an ever-growing population, Angelo adds.

"If we continue to waste water, that's an investment that ultimately the taxpayers will have to pay," he says. "I think it's in our best interest to use water more effectively."

That's why the benefit's theme is to be good water stewards, wherever we live.

"We are very fortunate in B.C., but that doesn't give us the right to waste water," Angelo says.

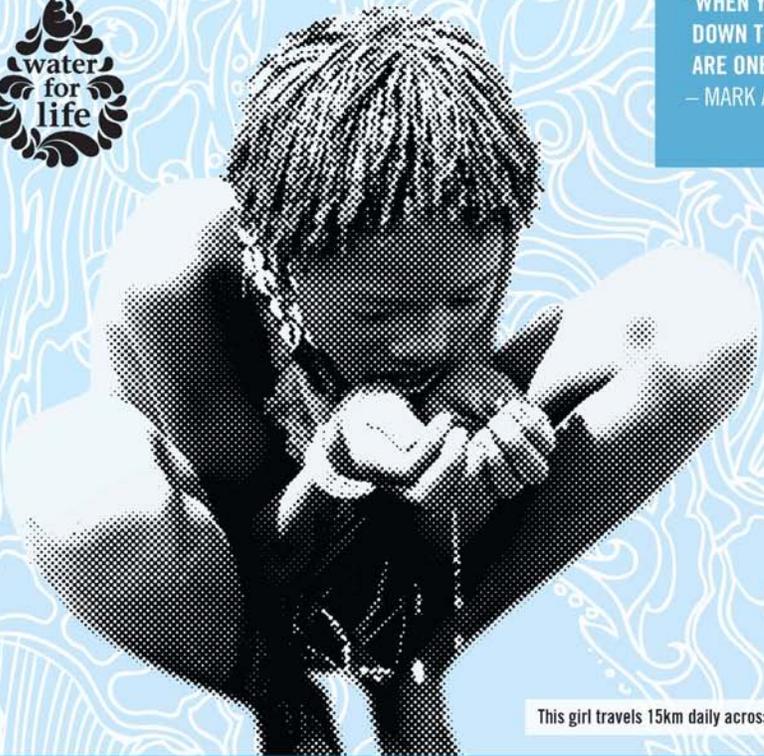
For Angelo, water is paramount.

"Water and life are one and the same, and I feel so strongly about that," he says. "We live on a blue planet. Far less than one per cent of the water on earth is clean and accessible. I do believe (that) properly caring for the limited amount of water we have around the world will be our most pressing environmental challenge."

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“WHEN YOU COME RIGHT
DOWN TO IT, WATER AND LIFE
ARE ONE AND THE SAME.”
– MARK ANGELO



This girl travels 15km daily across Ethiopia's Omo Valley for water.

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Burnaby News Leader: 2011 Hopes & Plans, A closer look at our rivers with Mark Angelo



Mark Angelo says the battle to preserve rivers and creeks is never-ending.
MARIO BARTEL/NEWSLEADER

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Mark Angelo is a longtime advocate of river conservation and the founder of both BC Rivers Day and World Rivers Day. He is chair of the Rivers Institute at BC Institute of Technology and has received numerous awards for his efforts, including the Order of British Columbia, the Order of Canada and the United Nations Stewardship Award. In addition to advocating, he has experienced rivers firsthand, paddling along hundreds of them around the world.

Q: Were there any surprises for you in river conservation in 2010? Please elaborate.

My biggest surprises this year were of a positive nature. For example, it was exciting to see such a massive global turnout this year for World Rivers Day, which involved well over 60 countries and millions of participants. This went far beyond our expectations

and the event continues to grow. It's also exciting to know that the origin, or genesis, of this international celebration can be found right here in B.C. In addition, another very pleasant surprise was the unexpectedly large return of sockeye salmon to the Fraser this year. This was the biggest return in a century and something indeed worth celebrating!

Q: What do you think is the most pressing issue in river conservation right now and why?

Across our province, I think there's still much to be done in terms of ensuring our waterways are adequately cared for. We've made some progress on specific fronts and some local governments, such as Burnaby, have been quite progressive in protecting local streams. But if you scan the entire province, many of our rivers continue to face an array of threats associated with pollution, inappropriate development, urbanization, the excessive extraction of water and the building of dams.

Q: What are your plans to help address this, or other, issues in the new year?

Through the Rivers Institute at BCIT, we're involved in an array of activities including applied research, various special projects relating to river conservation and restoration, and public awareness activities such as Rivers Day. We also try to mentor and support the next generation of river stewards; young people who will become our river champions of the future. My hope is that all of these activities, in conjunction with the good work that many other groups and individuals are undertaking, will help address at least some of these issues. In addition, we're organizing a "Water for Life" benefit concert on April 7 at the Michael J Fox Theatre. This program will be a mix of inspiring stories, stunning images and great music, all focused on the importance of water and the need to be good water stewards, wherever we might live. The show will also be filmed as a major Global TV special with all proceeds benefitting worthy water-related initiatives, both locally and abroad. Tickets will go on sale Feb. 1 through Ticketmaster.

Q: What would be the best thing that could happen in river conservation in 2011?

I think we have the world's finest river heritage right here in B.C. and yet our waterways continue to face an array of threats and pressures. A number of these were highlighted in the most recent "endangered rivers list", which included problems around excessive water extraction on interior rivers such as the Kettle and Coldwater; concerns about proposed coalbed methane development in the "sacred headwaters" of the Nass, Stikine and Skeena Rivers (three of our finest salmon rivers); and uncontrolled development and a loss of habitat along the "Heart of the Fraser" between Hope and Mission, one of the most productive stretches of river anywhere in the world. In addition, there's a myriad of other concerns ranging from the lack of an effective strategy and plan for independent power project development to the urgent need for a new Water Act that strikes a better balance between water extraction and the protection of aquatic ecosystems. So the best thing that could happen in the coming year would be to make progress on all of these fronts!

Q: The worst thing?

As a long time river advocate, I've seen my share of ups and downs over the years—and I've always believed that the worst thing that could happen to any sector in a given year is to make no progress, or even take a step backwards. I try to remain hopeful though that this won't happen.

Q: What are your hopes for the community in the new year that have the best chances of actually happening?

I'm very upbeat about our own community and I see a very vibrant future, both in the short and long term. And looking at the many natural areas that have been set aside in communities such as Burnaby (totaling about 25 per cent of the land base), I believe we have a unique opportunity here to strike an appropriate balance between a sound economy, a good environment and an excellent quality of life.

Q: Give us your wildest and craziest prediction?

In response to a similar question last year, after a disastrous 2009 sockeye return, I said my "wildest and craziest prediction" would be to see a massive salmon return in the fall of 2010. In light of what happened, perhaps if I answer this again in the very same way, we'll be fortunate once more in the fall of 2011.

News Watch



National Geographic: The River That Runs Through Nature's Greatest Spectacle

Posted by David Braun of National Geographic November 5, 2010

After witnessing the world's greatest wildlife migration along Kenya's Mara River, the author reflects on the role of rivers in nurturing entire ecosystems.

This post is part of a special National Geographic news series on global water issues.

By Mark Angelo

As an avid paddler and long-time river enthusiast, I've always marveled at the ability of rivers to nurture life. But while we often focus on the many aquatic life-forms that inhabit rivers, our waterways are more than just linear lifelines; they're also the foundation of entire ecosystems.

In this regard, rivers are complex features whose influence extends well beyond the water's edge. They mold and shape the land, deposit fertile soil onto flood plains, nurture productive stream-side habitat for wildlife, replenish groundwater supplies across large areas and provide life-giving sustenance for a countless number of organisms, including humans.

As a result, the land adjacent to rivers is a rich interface where life is more vibrant and diverse than elsewhere, providing some of the most productive natural habitats in existence. Perhaps nowhere is this more apparent than along the banks of Kenya's famed Mara River.

I first read about the Mara River many years ago as a university student researching a paper I was writing and I became intrigued by the exceptional wildlife values associated with this East African waterway. I've been fascinated by the river ever since and, while I've visited the area on several occasions for work-related reasons, my most memorable trip to the Mara was with my family.

Arriving in Nairobi in early August, my wife and I and our two daughters were greeted by our driver and then quickly set out for the source of the Mara, which originates in the lush mountain forests of Kenya's Mau escarpment. After a leisurely day's drive across the Rift Valley, we finally got our first glimpse of the river which begins as a tiny stream

in its uppermost reaches but quickly increases in size as it tumbles out of the mountains.

For the next several days, we followed the river as it flowed southward onto the plains and across the Masai Mara reserve. From there, the river continues into Tanzania's famed Serengeti National Park before turning sharply to the west and eventually flowing into Lake Victoria.



Wildebeest near a river in Serengeti National Park
NGS stock photo by Emory Kristof

By all accounts, the Mara is a spectacular waterway. It offers breathtaking views as it flows through a rich grassland environment and provides the most significant permanent water source in the region. But the river and the lush plains that it nurtures are perhaps best known as the “dry-season” setting for the world’s greatest wildlife spectacle: the annual migration of 1.4 million wildebeest.

The area encompassed by the wildebeest migration is massive in size, spanning both Kenya and Tanzania and covering most of the Serengeti-Mara ecosystem. Along with about 200,000 zebra and half a million Thomsons gazelle, the wildebeest migrate in a clockwise fashion, traveling more than 2,000 kilometers [1,250 miles] each year in search of rain-ripened grass. For these vast herds of animals, there is no beginning or end to their journey. Rather, they travel constantly in a never-ending search for food and water.

During the wetter parts of the year, the wildebeest congregate in the short grass plains of the Serengeti where about 80 percent of the females give birth to young calves. But as the dry season approaches and the food supply dwindles, they head north towards the greener pastures of the Mara.



Photo of wildebeest gathering by Mark Angelo

By July, the herds have amassed along the swollen Mara River. While some animals briefly pause here, most are instinctively driven to move on and they begin crossing the river, the final barrier to the rich grazing of the Mara plains. Sometimes the place of crossing is relatively shallow and placid, allowing most of the wildebeest to pass safely. Other times, it is not.

During my very first trip to the Mara, I was staying at a tented camp along the river when I awoke to what I thought was the sound of thunder. But, after hearing the commotion in camp, I soon realized it was the sound of thundering hooves. As I left the tent, it seemed as if the earth was vibrating beneath my feet. I scrambled up a nearby embankment and saw a large herd of wildebeest approach the river in a frenzy. They jumped down the steep bank, paused momentarily at the water's edge, then entered the river en masse.



Wildebeest beginning to cross. Photo by Dreamstime.



Wildebeest charging into the River. Photo by Dreamstime.

Once in the river, many of the animals struggled with the fast moving water. Of those that made it across, many had trouble getting out of the river due to its steep banks. Some of these animals appeared to panic, only adding to their exhaustion.

After several minutes (although it seemed much longer), most of the wildebeest appeared to have safely crossed, although a number of animals had perished. I saw a crocodile seize one young wildebeest and several more were probably preyed upon during the chaotic crossing. Still others succumbed to the high water levels and drowned, their carcasses gathering in the eddy pools downstream where they would be fed upon for weeks by vultures and storks.



Wildbeest carcasses in eddy. Photo by Mark Angelo.



Vulture feeding on carcass. Photo by Mark Angelo.

The heart-stopping excitement of a wildebeest river-crossing is something you can never forget and, to this day, I equate that experience with the ultimate definition of wilderness in its rawest and most unforgiving sense. But while the risks, and sometimes deadly consequences, of crossing the Mara have been well documented, this should not obscure the fact that the river plays a crucial role in maintaining one of Africa's most productive wildlife habitats.

Clearly, the story of the Mara River is more about life than death. This is especially apparent during the migration, which my family saw at its peak during our visit. Traveling in close proximity to the river, we encountered vast herds of wildebeest for days on end. At times, we were totally engulfed by them and my daughters were amazed that gold-colored grasslands could be turned black by the sheer number of animals around us. When the herd was moving, the wildebeest traveled in long, closely packed columns but, when stopping to graze, they would spread out as far as the eye could see. As Elspeth Huxley stated in *The Last Days in Eden*, "they looked like great hordes of ants speckling the plain."

When it was finally time to leave the Mara River, my oldest daughter Kelly commented on how fortunate we were to have seen this amazing place; "the greatest show on Earth" where natural interrelationships continue to function on such a large scale. While I wholeheartedly agreed, I also knew that there were environmental threats on the horizon that could impact the future health of the Mara ecosystem.

For example, things like habitat fragmentation, climate change and deforestation in the river's headwaters remain very real concerns. But also worrisome at present is the planned construction on the new "Serengeti highway" linking Musoma (on the banks of Lake Victoria) to the city of Arusha. This road will cut a swath through part of the park and construction is set to commence in 2011. Tanzanian authorities claim this will aid development in one of the most remote corners of the country. But in the view of many, this highway, which will be utilized by a minimum of 400 trucks a day, poses a threat to both the park and the migration.

Aside from its obvious potential to disturb or hinder the movement of animals, wildlife biologists fear an array of likely impacts. Among these are the high probability of vehicle-caused wildlife deaths, the possible introduction of domestic diseases, hydrological changes and the provision of easier access for poachers.

On an encouraging note though, a major internet and media campaign is now underway, led by a coalition of scientists, to try and stop the project. In a broader vein, there have been effective efforts by groups such as the African Conservation Foundation and the Mara Conservancy to foster an enhanced commitment to ecosystem sustainability. In addition, many conservationists are pushing the Tanzanian government to consider a more southerly route for the road that would be far less intrusive. Only time will tell if they're successful.

As I reflect on my past trips to the Mara River, I believe that, at least up until now, Kenya and Tanzania have succeeded in doing what many other countries have failed at. They have protected a substantial natural ecosystem and, as a result, the great wildebeest migration remains largely intact.

In a similar vein, I'm hoping that Canada and the United States will be just as successful in protecting the migratory range of the massive Porcupine caribou herd (so-named after a river these animals cross on the way to their calving grounds). Like the Mara, the ecosystem that sustains this migration spans two countries but has frequently been threatened by oil drilling proposals in Northern Alaska.

The Mara River, and the lush plains that it feeds, also illustrates the need to manage waterways as centerpieces of local ecosystems. In British Columbia, our rivers are amongst the finest in the world and yet, they continue to face an array of threats including pollution, resource extraction, encroaching development and questionable land-use practices. If we are to do a better job of protecting our rivers in future, we must think in broader terms than we have in past and increasingly focus on the sound management of watersheds and ecosystems.

If we can achieve this, that will not only bode well for rivers but will also mark an important starting point in our efforts to better care for the planet. Realistically, I recognize that it won't be easy to undo the damage that has already been inflicted on many rivers. But after a magical experience along the Mara, one can't help but be invigorated and a little more hopeful.

Mark Angelo is the chair of the *Rivers Institute at the British Columbia Institute of Technology* and an internationally acclaimed river conservationist. He has received the Order of Canada, his country's highest honor, in recognition of his river conservation efforts both at home and abroad. He received the United Nations International Year of Fresh Water Science, Education and Conservation Award, the Order of British Columbia, the National River Conservation Award, and an honorary doctorate from Simon Fraser University. He is a Fellow International of the Explorers Club. Angelo is the chair and founder of World Rivers Day, an event celebrated across dozens of countries on the last Sunday of each September. He has traveled on and along close to 1,000 rivers around the world over the past 5 decades. He has authored numerous articles and papers about rivers and his expeditions, including the Riverworld presentation launched in concert with National Geographic Online in 2003 and shown to audiences across North America.



The views expressed in this article are those of Mark Angelo and not necessarily those of the National Geographic Society.

Vancouver Sun: Humble bid to save B.C. rivers spawns global effort

BC Rivers Day, born 30 years ago, now celebrated worldwide

Author: Kim Pemberton

Source: Vancouver Sun

Date published: Fri, 2010-09-24

VANCOUVER - Thirty years ago, a small group of British Columbians got together to pick up garbage from the Thompson River.

It was the genesis for BC Rivers Day, which launched a movement that now attracts millions of people to thousands of events happening throughout the world in celebration of rivers.

This Sunday, the founder of Rivers Day, Mark Angelo, will be joining a much larger group of river enthusiasts at Fraser Foreshore Park in Burnaby.

“We had no idea it would become an international event when we started this 30 years ago. This has been really exciting to see it grow and evolve,” said Angelo, an avid fly fisherman and paddler.

He is also chairman of the two-year-old Rivers Institute at the B.C. Institute of Technology and former chairman of BCIT’s fish and wildlife department, where he taught for 35 years.

Angelo, who was given the Order of Canada for his river conservation work, said ever since he was a child he has had a passion for fast-flowing water. He lives “a stone’s throw” from the Fraser River, and said he has paddled every kilometre of the Fraser with his wife and children over the years.

“British Columbia has the finest river heritage in the world. The fact so many British Columbians get involved in Rivers Day speaks to the fact that our rivers are close to our hearts,” Angelo said, adding that there were 75,000 participants in 100 Rivers Day events in B.C. last year.

“They were involved in stream cleanups, fish enhancement projects, educational events,” he said. “The spinoff of this day is, more people become active advocates [for river conservation].”

The day evolved after the provincial government formally declared Sept. 26 as Rivers Day in 1990, Angelo said.

In 1993, organizers asked 100 B.C. municipalities to hold specific Rivers Day events, and it has snowballed from there. Now, communities throughout Canada and the world celebrate World Rivers Day.

Global participation was formalized six year ago through the United Nations, which declared 2005 to 2015 as the U.N. Water for Life Decade.

“There are now literally thousands of events happening around the world involving millions of people,” Angelo said.

This year’s events include picking up litter from the Thames River in England and a shoreline cleanup and improved sewage treatment on the Ganges River in India. In Russia, a group will be out on the rivers identifying illegal dump sites, and in Poland and West Africa, educational programs will be launched about the value of rivers.

To find out about local BC Rivers Day events, go to the Outdoor Recreation Council of B.C.’s website at www.orcbc.ca.

National Geographic: World Rivers Day set for September 26th

Posted by David Braun of National Geographic September 9, 2010

With its origins in British Columbia, Rivers Day has now evolved into a global event celebrating the values of our waterways while also urging the need for better stewardship.

By Mark Angelo

This post is part of a special news series on global water issues.

As final preparations are being made for World Rivers Day, which will take place later this month, I've found myself thinking a lot recently about the origins of this important and timely event. And while World Rivers Day as a global phenomenon has been around for only 6 years, its beginnings go back much further than that.

I've had a love for rivers ever since I was a child. Yet, I didn't have to be very old before I gained an appreciation of the many threats that confront our waterways. As an example, living beside the Los Angeles River as a boy, I spent a great deal of time along this once productive stream that was now entirely encased in a massive concrete culvert. And then, during a trip to Arizona in the early 60's, I saw the completion of the Glen Canyon Dam that flooded one of the most beautiful canyons in the United States. Moving to Montana, I lived close to the Miltown Dam on the Clark Fork River, the upstream stretch of which had become one of the more toxic sites in the country as a result of accumulating mining residue.

During my years in Montana, I became an avid paddler and fly-fisher, exploring many of the state's great rivers in the process. So when I had the chance to move to British Columbia in the early 70's, I looked forward to living in a province renowned for its many great waterways. I was also excited about living close to the Fraser River, one of the world's great salmon rivers.

Yet, despite its abundance of incredible waterways, I was surprised that there wasn't an event of some kind that celebrated the importance of rivers. In an effort to address this, we approached the Province of BC in 1980 about endorsing an inaugural Rivers Day

event that would take place on the last Sunday in September. To commemorate that, we organized a clean-up on the Thompson River, a major tributary of the Fraser.

On that day, working with groups such as the Outdoor Recreation Council of BC, a flotilla of rafts and a group of 40 volunteers collected a massive amount of garbage and debris while also making arrangements with local towing companies to remove several abandoned cars that sat on the rocks above the river. The event was a great success! That evening, all the participants got together and talked about how rewarding the day had been (it was also a lot of fun!). Everyone was keen to do it again so the following year, we went ahead and planned a few additional events. Once again, they were all successful so we planned a few more the year after that. And before we knew it, the event took on a life of its own.

Initially known as BC Rivers Day, this celebration grew to include festivities around the province involving up to 75,000 people. Events ranged from stream cleanups and habitat enhancement projects to educational outings and community riverside celebrations.

Given the success of this initiative in British Columbia, I couldn't help but think there was potential for a similar event internationally, especially in light of the positive response to the United Nation's International Year of Fresh Water in 2003. When the UN then announced that they would embark on the Water for Life Decade commencing in 2005, an initiative aimed at increasing awareness of the importance of our global water resources, we saw a great complimentary fit for the establishment of a formal World Rivers Day.

Consequently, we approached agencies of the UN, including the United Nations University and the International Network on Water, Environment and Health. We received their blessing and, in September of 2005, the first World Rivers Day was celebrated. Since then, we've formally partnered with the UN's Water for Life Decade initiative and the event has grown in leaps and bounds.

This year, dozens of countries and millions of people will be involved in Rivers Day celebrations. Events will take place from Canada to South Africa; from England to the Caribbean Island of Dominica; from Poland to the United States; and from India to Taiwan. And while these events will help to create a greater awareness of the natural, cultural and recreational values of our rivers, they'll also strive to encourage participants to become even more active as river advocates and stewards.



The growing interest in World Rivers Day, now coordinated by the Rivers Institute at the British Columbia Institute of Technology, is very timely in that rivers around the globe are facing increasing pressures, ranging from urbanization and pollution to the building of dams and the excessive extraction of water. Climate change is also increasingly taking its toll on many rivers. If events like Rivers Day can help to profile these issues while also engaging the

public and creating an even greater appreciation of the many values of our waterways, then it can only be positive.

My hope is that, on September 26th, people around the world will take time to think about their local rivers and streams. Hopefully, we'll also consider how we might better care for them. For many, they may be able to attend a nearby Rivers Day event, or perhaps even plan one of their own. If nothing else, Rivers Day is a wonderful and appropriate opportunity to simply get out and enjoy a nearby stream and contemplate just how much they contribute to our quality of life.

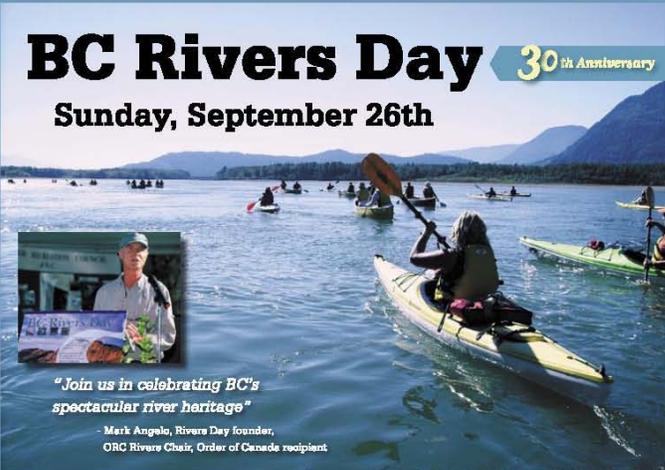
Coming back to British Columbia, many of our Rivers Day events this year will focus on the recent return of 34 million sockeye salmon to the Fraser River; our biggest run in 97 years. After several years of poor returns and lots of disappointment, we now have something to celebrate. And while many challenges and threats to our rivers and fish stocks remain ahead, this year's magnificent salmon return offers a glimmer of hope.



Mark Angelo is the chair of the Rivers Institute at the British Columbia Institute of Technology and an internationally acclaimed river conservationist. He has received the Order of Canada, his country's highest honor, in recognition of his river conservation efforts both at home and abroad. He received the United Nations International Year of Fresh Water Science, Education and Conservation Award, the Order of British Columbia, the National River Conservation Award, and an honorary doctorate from Simon Fraser University. He is a Fellow International of the Explorers Club. Angelo is the chair and founder of World Rivers Day, an event celebrated across dozens of countries on the last Sunday of each September. He has traveled on and along close to 1,000 rivers around the world over the past 5 decades. He has authored numerous articles and papers about rivers and his expeditions, including the Riverworld presentation launched in concert with National Geographic Online in 2003 and shown to audiences across North America.

BC Rivers Day 30th Anniversary

Sunday, September 26th





"Join us in celebrating BC's spectacular river heritage"

Mark Angelo, Rivers Day founder,
ORC Rivers Chair, Order of Canada recipient

A BC Success Story

BC Rivers Day is a province-wide celebration of our waterways, taking place every year on the last Sunday in September. Coordinated by the Outdoor Recreation Council (ORC) and the Rivers Institute at BCIT, Rivers Day is proclaimed by more than 90 communities across BC and attracts over 75,000 people. Rivers Day is a great BC success story, inspiring UN agencies to endorse it as a global event. World Rivers Day is now celebrated on the same day as BC Rivers Day!

Rivers Enrich Our Lives

BC Rivers Day celebrates the natural, cultural and recreational values of our rivers. It increases public awareness of the many benefits rivers provide to us, such as clean water, spawning salmon, economic wealth, and a place to play. Our rivers contribute to who we are as British Columbians.



Celebrating 30 Years of Success!

BC Rivers Day began in 1980 with 40 volunteers helping to clean up a section of the Thompson River. The event has grown in scope and diversity to become the largest of its kind in North America. You can join an event in most BC communities, or think about starting one yourself!

- River clean-ups •
- Art exhibitions •
- School projects •
- Riverside nature walks •
- Community festivals •
- Paddle trips •



Find an Event

For a province-wide list of Rivers Day activities, or to register your own event, contact the **Outdoor Recreation Council**.
Web: www.orcbc.ca **Phone:** 604-873-5546
Or visit: www.worldriversday.bcit.ca





News Watch



National Geographic: Omo River dam threatens traditional farming and culture in Ethiopia

Posted by David Braun of National Geographic August 4, 2010

An ancient way of life that sustains 200,000 people will be lost if the Ethiopian Government can find the money to build a big new hydroelectric dam on the Omo River. *This post is part of a special National Geographic news series on global water issues.*

By Mark Angelo

This past week, I returned from a remarkable trip along the Omo River in the remote south-western region of Ethiopia. Traveling through this amazing country, you quickly realize that many North Americans have a pre-conceived image of Ethiopia; one that's molded by frequent news stories about drought and hunger along with the crushing poverty that exists in some places.

But while these remain serious issues (particularly in the country's north), Ethiopia is also a land with an intriguing history, many diverse and unique landscapes, and stunning, centuries-old monuments.

The country's south-western sector, bisected by the Omo River, is also widely known as one of Africa's most unique and intact cultural landscapes.



Photo courtesy of Mark Angelo.

The various ethnic groups that reside along the Omo were generally shielded from the outside world by rugged mountains and seemingly endless savannah. Their isolation was further extended by Ethiopia's unique status as one of only two African nations never to be colonized by Europeans.

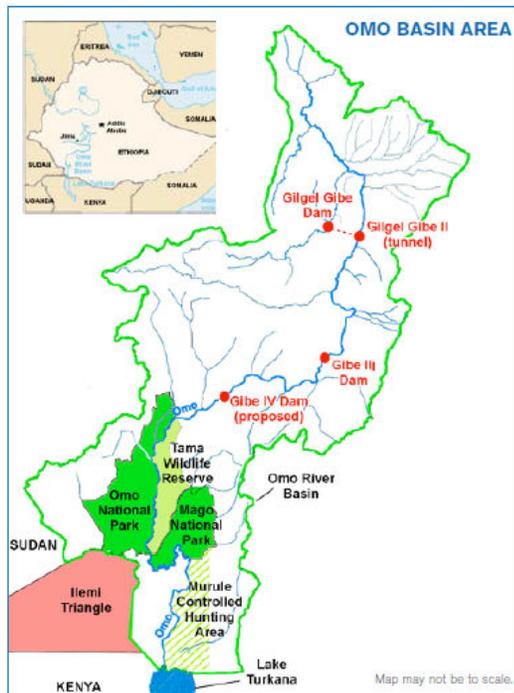
In the absence of significant external influences, the various tribes of the Omo carried on with their customs and traditions, migrating by season and occasionally fighting with each other.

Yet, while the indigenous groups of the area remain distinct and disparate, they also share a rich, symbolic culture, often expressed through body art and adornment. This is a way of life that has long since vanished from most of the continent, but glimmers of this "historical Africa" are still found here.

To many of the tribes along the lower Omo, livestock is the embodiment of wealth and prestige. Yet their livelihood is dependent on planting crops of sorghum, maize and beans using what's known as "flood-retreat agriculture." This type of farming is dependent on the annual flooding cycle which deposits a layer of nutrient-rich silt beside the river, making the land productive for another year.

Tribes such as the Bodi, Karo, Muguji, Mursi and Nyangatom have farmed this way for generations and their culture revolves around the natural pulsations of the Omo.

But unbeknown to many who live here, there is significant change in the wind—and it's coming from upriver.



Map of Omo basin courtesy of International Rivers.

The annual rise and fall of the Omo waters is, in effect, the ancient heartbeat of the valley that has dictated the economic and social values of the almost 200,000 tribal members dependent on farming the river's banks. All this will change dramatically in the coming years due to the construction of the massive Gibe 3 hydroelectric dam, located a few hundred kilometers upriver.

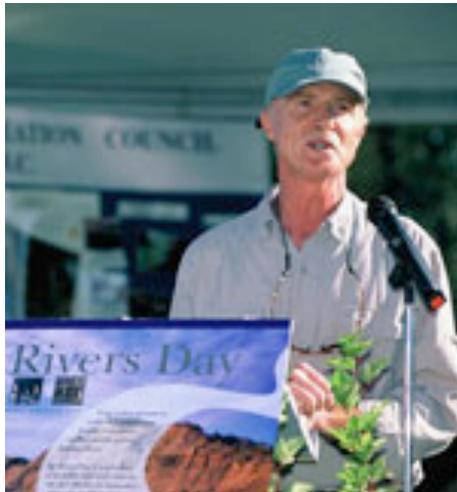
Once the dam is completed in 2012, the seasonal flows of the river will be dictated by electricity production for distant urban centers and export. Resulting downstream flows will become much more uniform, making flood-retreat agriculture impractical. Water volume is also expected to be permanently reduced due to seepage and evaporation losses from the 150-kilometer [93-mile]-long reservoir.

Understandably, there's growing concern that, if the dam reigns in the seasonal flooding cycle, the traditional way of life along with the cultural identity of several tribes will be severely impacted. Potential repercussions could range from food shortages to increased episodes of tribal conflict and displacement. There's also increasing anger over a lack of communication, consultation and mitigation; something that should be addressed to a much greater degree.

This was passionately stated in a poignant interview I did with the chief of the Karo people.

The Ethiopian government is still seeking supporters to finance the final stages of the dam. On an encouraging note, the European Investment Bank withdrew its financial support for the project last month, citing the concerns raised above.

If and when an additional financiers are found, I'm hoping they'll insist on fully addressing the issues raised by local indigenous cultures as a precondition to any future support. At the very least, I think we owe that to the people of the Omo.



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