Flying Fish (Chalcalburnus tarichi) in Lake Van, Turkey

Turkey
Mustafa SARI
Concise Summary: Help us pitch this solution! Provide an explanation within 3-4 short sentences.

Flying Fish in Lake Van, Turkey
Pearl Mullet is endemic fish live in Lake Van, Eastern Turkey. Lake Van is the biggest soda lake on the world. Its water contain high degree soda and salt and not suitable both freshwater and marine fish. Pearl mullet live in the lake but migrate to fresh water for reproduction. It flying, jumping above some natural and man made barrier like as salmon. Many many fish came to fresh water from april to june and you can see hundered fish during they jumping. Eroie Governorship completed new watching point for fish migration on road of the Van-Erzurum. Doga Gozculeri Dernegi (Nature Observers’ Society) determined some trekking and bicle route along the river. You can see migrating fish while walking or bicling near of the rivers. Lake Van around has very historical records and dominant monument came from Urartian time before 3000 years.
**Main insight addressed**

**Incorporate sustainable practices**

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**Innovation**

**What is the goal of your innovation?**

Support the rural development and conserving pearl mullet fish living in Lake Van by supported alternative income generation with ecotourism.

**How does your approach support or embody geotourism?**

Lake Van is the biggest soda lake in the world. Its water is contain high degree soda (pH 9.8) and salt (0.19%). Its extreme water quality does not suitable both freshwater and marine fish. Only pearl mullet (Chalcalburnus tanichi, Cyprinidae family) lives in this lake. Fish lives in the lake but not reproduce into exterm water in Lake Van. It has to migrate to freshwater around the lake. Fish jump on some natural and man made barrier on the rivers during the spawning migration. Scientist determined over fishing on the pearl mullet population in 1996. Huge capturing (90% in total) was done during the migration as illegally and only 10% fished legally. And new fishing management plan was developed. Spawning season fishing was banned and local people not like this situation. We developed some alternative income sources like as ecotourism, animal husbandry, fish can and salted fish producing workshop, etc for local people at spawning season. I determined attractive point for watching fish migration, trekking route and bicle route along the some rivers. I developped new project for landscaping the watching point. Project was financed EU and we have nice watching site for fish migration. We want continue to develop some new route trekking and bicle. We have several training program and other facility for sustainable fisheries to pearl mullet. Illegal fishing rate was decreased from 12000 ton to 4000 ton in 2007. I hope it will be more decrease future.

**Describe your approach in detail. How is it innovative?**

My studies non contain only one side. It contain a lot of stages and we have several participant aroun the Lake Van. Few scientific studies had been conducted on Lake Van Fish prior to my work, which determined the levels of fishing that could be reliably sustained. I found that there were approximately 43 thousand tons of fish in 1997, and concluded that to be sustainable, no more than 5,800 tons of fish should be annually fished. However, since 1987, over 10 tons a year had been fished, and about 90% of that harvesting occurred during the spawning period, accelerating depletion. But fishermen were not open to changing their practices and governmental regulators were indifferent. I engaged in two failed efforts to arrest the depletion of fish in Lake Van before he found success. I first tried to convince the government, using scientific data, to take action by implementing fishing prohibitions and a new 2-year management plan, after which results would be assessed. But after several years of bureaucratic wrangling, I realized I needed to try a different approach.

I started to work collaboratively with the fishermen and wholesalers. He knew that every year, fishermen were selling to wholesalers for less, as the size and weight of the fish was being negatively impacted by over-fishing. I brought the two groups together in 1999, and after many meetings, it seemed that they had agreed to specific rules of engagement. But these ultimately broke down. Not to be dissuaded, I decided to try a different approach, by establishing an organization. Together with two environmental experts, I framed a strategy for engaging a wider group of stakeholders. They also began a national campaign to raise awareness of the depletion of Lake Van fish. As part of this wider engagement strategy, they systematically visited local government offices in the lake region, as well as relevant public institutions.

**Describe your program promote traveler enthusiasm, satisfaction, and engagement with the locale?**

New developed tourism activity is related with nature and biological diversity. Our fish endemic and totaly natural in Lake Van. This type of activity support local people and some species together. Around the Lake Van very rich as culural and historical monument raletad with Urartian Civilization. Urartian Civilization was dated before 3000 year. Tourists may see fish jumping or flying near the Semiramis Cannal came from Urartian.

I hope it will be more decrease future.

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**Impact**

**In one sentence describe what kind of impact, change, or reform your approach is intended to achieve.**

Poor local people will be win new income source while pearl mullet conserving and sustaining.

**Describe the degree of success of your approach to date. Clearly define how you measure quantitative and qualitative impact in terms of how your approach contributes to the sustainability or enhancement of local culture, environment, heritage, or aesthetics? How does your approach minimize negative impacts? 200 words or less**

We have realy success for sustainability of the pearl mullet fisheries. Because professional fishing rate is increasing and illegal fishing decreasing. I have reversed the extinction of a commercial species of fish because of over fishing and in doing so, has come up with a replicable approach to fishery management. Pearl mullet is important both ecological view and economic view. Because fish is endemic to Lake Van and into redlist. Other side, 14000 poor local people is earning life on pearl mullet fishing around the Lake Van.

**How does your program promote traveler enthusiasm, satisfaction, and engagement with the locale?**

New developped tourism activity is related with nature and biological diversity. Our fish endemic and totaly natural in Lake Van. This type of activity support local people and some species together. Around the Lake Van very rich as culural and historical monument raletad with Urartian Civilization. Urartian Civilization was dated before 3000 year. Tourists may see fish jumping or flying near the Semiramis Cannal came from Urartian.

**In what ways are local residents actively involved in your innovation, including participation and community input? How has the community responded to or benefited from your approach?**

Eastern part of Turkey is not development accoding to west part of the country. Benericl income is low than country mean income. I and is very high.
Rivers. Lake Van around has very historical records and dominant monument came from Urartian time before 3000 years.

(Nature Observers' Society) determined some trekking and bicycle route along the river. You can see migrating fish while walking or bicycling near of the river during they jumping. Ercis Governorship completed new watching point for fish migration on road of the Van-Erzurum. Doga Gozculeri Derneği above some natural and man made barrier like as salmon. Many many fish came to fresh water from April to June and you can see hundred fish flying, jumping and playing above fresh water. Pearl mullet live in the lake but migrate to fresh water for reproduction. It flying, jumping and playing above fresh water. Pearl Mullet is endemic fish live in Lake Van, Eastern Turkey.

Lake Van Basin is contain famous volcanic mountain like as Suphan, Tendurek, Nemrud and Artos. Ararat Mountain is very close to Lake Van. You can drive only 1 or 2 hour from Lake Van to Ararat Mountain. Area has contain several endemic plant around the lake. You can see rare endemic plant cost of the Lake Van. There are several good hotel and local food restaurant around the lake. Ahlat is famous Selcuklian town at west part of the lake coast where contain the biggest historical cemetery in the world. Van cat is other famous cat species in area and you can eat different local food.

**Sustainability**

Is your initiative financially and organizationally sustainable? If not, what is required to make it so? What is the potential demand for your innovation?

We have small but strong NGO. Nature Observers' Society is very famous in Turkey especially for rural development. We have some financial support but not enough for new project. We need new promotional material and campaign butched.

How is your initiative currently financed? If available, provide information on your finances and organization that could help others.

Please list: Annual budget, annual revenue generated, size of part-time, full-time and volunteer staff.

Our initiative is financed our member. Also we have some project which financed international and national institute. UNDP had financed pearl mulled project between 2001-2007. Reginol Environmental Center-Turkey (REC-TURKEY) financed small part of training program. EU financed some part of our studies. Also our national research center -TUBITAK, financed some part of scientific studies.

Our 2007 budget is 150000 USD

Part time staff 5 person

Full time staff 2 person

Volunteer staff 20 person

What is your plan to expand your approach? Please indicate where/how you would like to grow or enhance your innovation, or have others do so.

We developed new and a replicable approach to fishery management. It contain several subtitle as training, income generation, social change, movie preparation together children, training material generation, etc. We are preparing new project for social change and young people participating.

I will organize story contest related with pearl mullet migration among the 10-14 year old children around the lake. I will prepare story book for child after the contest.

What are the main barriers you encounter in managing, implementing, or replicating your innovation? What barriers keep your program from having greater impact?

Main barrier my encounter is participating to project. Old participating theory does not run my area. Because conservation studies have some mission as decreasing the fishing amount during the spawning season. In this situation, local people does not like your project and they reacted participating.

I developed new participating theory and applied around the Lake Van. I saw new theory run and locals participated my project. I understand very well, conservation project needs some new approach for success.

**The Story**

What is the origin of your innovation? Tell your story.

My work began in 1993 as a doctoral student where I concentrated on studying the depletion of the Pearl Mullet stock from Lake Van, Turkey’s largest lake and the largest soda water lake in the world (approximately 3,700 square km). I was the first to determine how many fish lived in the lake, how much was fished, and how the existing fishery affected the Lake Van fish population as well as the fishery management method to be used for sustainable fishery. But I quickly learned that it was not enough to be armed with research models and ensuring recommendations. Upon visiting the fishing communities that depended on the Pearl Mullet, I faced the difficulty of adapting academic models to the complex realities of people's conflicting desires. My problem was how to work with this poor population of 15,000 whose lives depended on fishing, so that they embraced sustainable practices to safeguard fish supply for future generations.

Please provide a personal bio. Note this may be used in Changemakers’ marketing material.

I am 42 year old. I have already teach fisheries management in Yuzunuc Yil University, Van, Turkey. I married and have two children.

Please write an overview of your project. This text will appear when people scroll over the icon for your entry on the Google map located on the competition homepage.

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