

PHYSICAL IMPACTS OF OLUVIL HARBOUR

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ABSTRACT: The Oluvil is a coastal village located in Ampara district of eastern province of Sri Lanka. The newly constructed commercial and fisheries harbor. The commercial harbor has enough depth to handle ships up to 5,000 metric tons and the fishery harbor can hold more than 250 fishing boats

The environmental problems quickly increased in the past decades by the human activities. We are the most contributors to this problem due to industrial development and urban development, in the respect Oluvil port development is created more problems up to now.

The development of Oluvil harbor project is made more problems in the nearest area of Oluvil. The coastal erosion is the one of major physical impact, identified in Oluvil area along. Before the port development, it does not have erosion but after the development it has eroded much higher level, than the previous level. The sea is retreated into the land area. The very higher range of land is become in to the sea, about more than 100 meters.

Keywords: Impacts, Harbor, erosion, mangrove

1. INTRODUCTION

The newly constructed commercial and fisheries harbor together with the ice manufacturing plant in Oluvil commenced on the 1st of July 2006 at a cost of 7,000 million rupees. The Financial assistance for the project has been given by the government of Denmark. The Sri Lanka Ports Authority stated this interest free loan is scheduled to be paid back within 10 years and the income of these two harbors will be utilized to pay back the loan. This idea was headed by Late Dr. MHM. Ashraf. It was finished on 2013 December. The commercial harbor has enough depth to handle ships up to 5,000 metric tons and the fishery harbor can hold more than 250 fishing boats.

By the human activities the environmental problems increased in the past decades. We are the most contributors to this problem due to industrial and urban development in the respect, Port development of Oluvil is created more problem up to now. It is made more problems to the environment, and the human being.

The port development is made more problems in the nearest area of Oluvil. The coastal erosion is one of major problem identified in Oluvil site. Before the port development, it does not have more erosion but after the development it has eroded much higher, than the previous level. The sea is retreated into the land area.

In addition to the coastal erosion, it is also affecting the agriculture, fishing, coconut cultivation, vegetable cultivation. Further this is causing to deplete the turtle reproduction, fish reproduction and coastal mangroves destruction.

Study Area

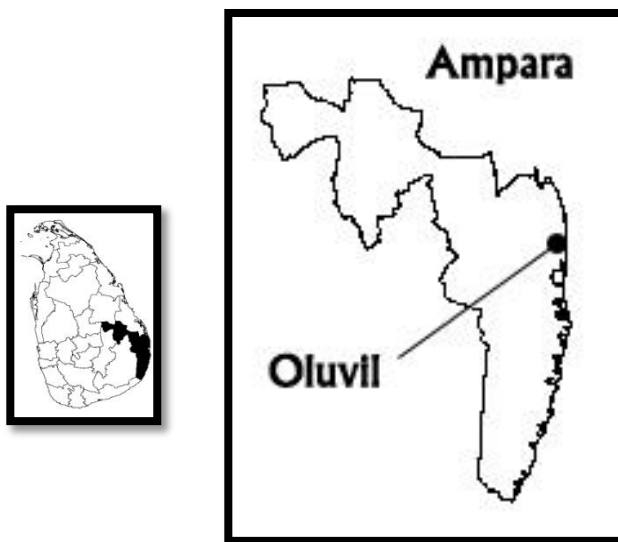
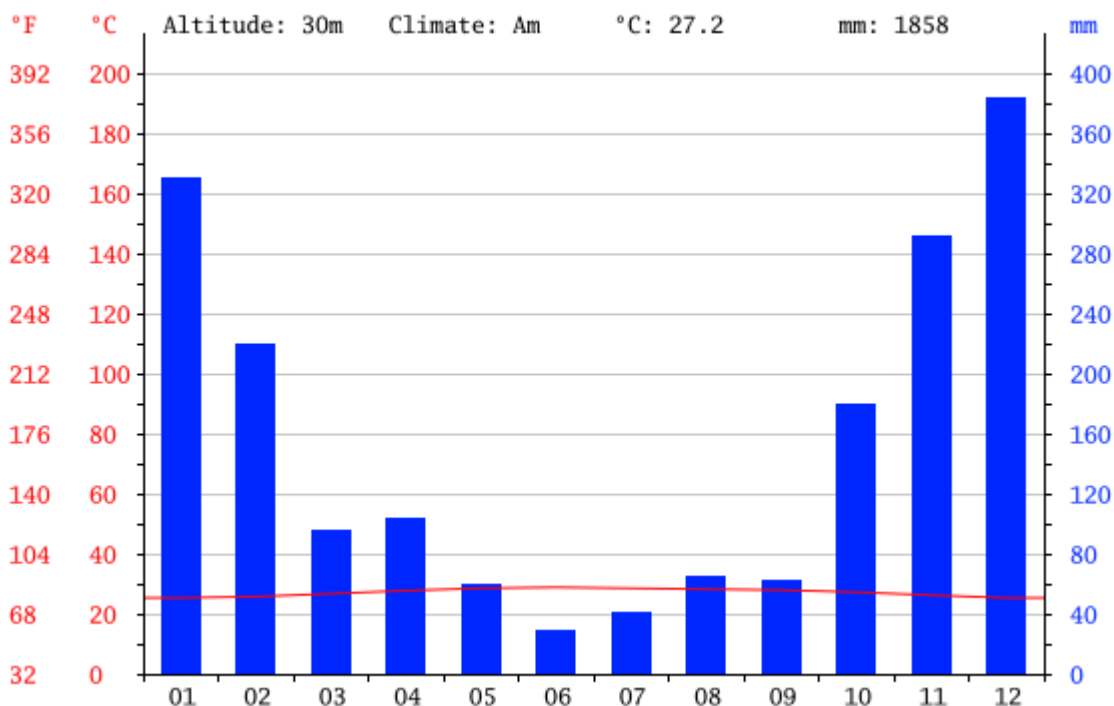


Figure 01

The harbor is located at the Latitude of East 81° 51' 55" and the Longitude of North 7° 16' 34". It is getting rainfall by northeast monsoon. High temperature is 28.5 to 33°C and low temperature is 25 to 25.5°C, Average wind velocity is 5.6 to 7.9 km/h, annual average of sea level pressure is 1005.2 to 1013 millibar. Population of Oluvil is 8439 report by 2007 census report. Females 4194 males 4245. People involving in the fishing, business, industry and government jobs.

Monthly Average Rainfall and Temperature



Source: <http://en.climate-data.org/location/718293/>

The Government has many great objectives and goals in build this construction. It was include in their annual report 2010 by Sri Lanka port Authority. The goals and objectives are as follows.

- To establish Sri Lanka as a Maritime Hub.
- To project the Port of Galle as a preferred cruise vessel destination whilst offering commercial port services.
- To develop regional Ports of Oluvil, Point Pedro and Kankasanthurai as gateways for the regions development.
- To maintain a profitable operation of the Commercial Ports and to develop a good reputation as an efficient and reliable Port operator by providing a high quality customer service.
- To develop activities to provide a competitive and quality service for container operation with a view to attracting transshipment activities including relay cargo, trade and bonded activities.
- To develop and maintain state of the art facilities in the commercial Ports of Sri Lanka.
- To maintain effective and efficient Port Service.
- To provide a competitive edge to importers and exporters by ensuring a cost effective, efficient and reliable service.
- To ensure the safety and security of ships, cargo, Port users and Port infrastructure.
- To contribute to the Consolidated Fund of the General Treasury for current and capital expenditure of the government.
- To diversify the Port related activities such as offshore services, bunkering, fresh water supply, and container repairs, etc.

Sketch of Oluvil Harbour



Image-1

Satellite Image of study area

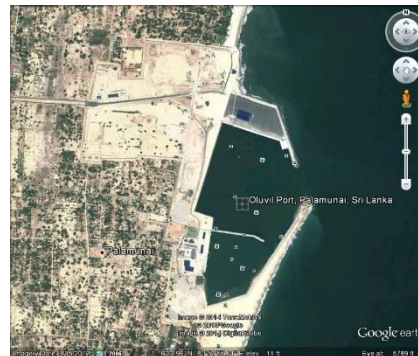


Image-2

Objectives

The Oluvil harbour was started with lot of ideas and expected more benefits. But nobody knows. The main objectives are follow

01. To elaborate consequences Physical Impacts by Oluvil harbour construction
02. To bring out the advantages and disadvantages of harbour construction.
03. Providing suggestions and recommendations

2. DATA COLLECTION METHODOLOGY

The Information were generated from the data, received in two types of data methods. They are Primary and Secondary data. The primary data was helped to collected details about of harbor. These methods are,

Primary data

- ✓ Interview - Visit to Oluvil beach and the harbour area and information taken in way of interview from area people. Some information was collected from the fisher men.
- ✓ Identified the coastal erosion area and taken some photos, video clips the important places.
- ✓ Direct observation - Visit the Oluvil harbour, and got useful details about service of harbour.

The details were collected as the Secondary data

- ✓ Websites
- ✓ Senses report.
- ✓ Government Institutions and NGOs

3. RESULTS AD DISCUSSION

The Development work of the Oluvil Harbour commenced on the 1st of July 2006 at a cost of 7,000 million rupees. The Financial assistance for the project has been given by the government of Denmark. The Sri Lanka Ports Authority stated this interest free loan is scheduled to be paid back within 10 years and the income of these two commercial harbors will be utilized to pay back the loan. This construction as start with fund of Denmark in 2006. To start this construction work they remove many settlement place. These images 1 and 2 are showing pattern of the Oluvil coastal sites is changed by the harbor construction.

The harbour development of Oluvil is creating more problem to the area and the environment. The main cause of this problem is the harbor made of artificially for the development. Even this development is not given more benefits to society or government, but it is also having a lot of disadvantages. The main motive of this project is to reduce or control the problem without more effects in the future.

Before 2009, all people were very happy and joyful life. They were on daily works in life without any problems after the harbor project, they are facing more problems. These people are involving in the activities of agriculture, fishing and self-

employment. North site of the harbor had more agriculture land of 30 acre. They cultivate vegetables, coconut trees. The people who depend on the agriculture get more benefits physically and economically. They are using the traditional fishing methods. They got more income from deep sea fishing each season. And also they are doing the fresh water fishing in Kali-odai River. These plants are helped to the turtle reproduction in the month of December.

After 2009, the main problem is coastal erosion. The land eroded after the development. The North side of the harbor more erosion happened but in the south site of the harbor is accumulating. It is continuously happened after the harbor development started. Because of this erosion, more land retreated in to the sea more than 100 meters land. After the government makes a solution against to the erosion, they have made wave barkers by granites in the sea shore. This improper wave barkers creates more effects on erosions and the twenty fishing boats were broken in February second week 2014. More than 3000 coconut trees were uprooted. The mouth of Kali-odai River had changed by erosion

Before Harbour Construction



Photo-1



Photo-2

Oluvil coastal area is extremely changed by the harbour construction, when compare with the images. There was coastal land segment is affected by erosion due to this construction work.

According to the Government expectation the advantages are as follows:

- Oluvil port will be the main fishing harbor in the eastern coast.
- Sri Lankan government in its plan give economic development under the five hub concept had decided to develop fisheries harbors. They expected be a benefit to the development activities in the Eastern part of the country.
- The fisheries harbor consist of ice plants, cold room facilities, storage facilities for fishing equipment and many more.
- It will can give job opportunities to people of south east.
- The Oluvil Port will play a significant role in the agriculture and fisheries industry in the Eastern Province.

- The port authorities are planning to call both local and foreign investors to start fisheries related industries.
- The port authorities will look forward to generate a large number of indirect employment opportunities once the harbor starts to function.
- There were 5000 Sinhalese could get job opportunities into the harbor.

Whatever, Sri Lankan government and Sri Lanka port Authority has expected lot of ideas and many benefits. But Oluvil harbour project not bring what they have expected. Because, they are facing lot of problems and disadvantages on its.

The Oluvil coastal area is changed physically and it has prevented the human activities. There are many disadvantages by construction work of harbor. Such as prevent to fishing, destroy the coconut trees, mangroves.

- Earlier period fishermen could get fishes easily and earn income about from 300kg up to 5000 kg each day. But now they couldn't such that.
- The coastal area has changed by fast sea waves, so coastal erosion mostly happened still today. Fish resources were reduce in grand level.
- Fisher men get the fresh water fishes in the river, it is called "Paalakattu/kaliyodai" for a long period. But after work of harbor this river was destroyed in large parts. So it's become a many challenges. The turtles were coming to lay the eggs and reproducing their generation, but now not visible.
- Coastal area people are lost their living places.
- Climate change is often occurring. So wind is extreme prevent their job and it's affected their daily life.
- Normally, they could produce about 5000 coconuts each day. But after this period about 5000 coconut trees were damaged. So here very difficult to get at least 50 coconuts per day.
- Fish resources areas have taken into the harbor purpose. Therefore, about into 500- 1000 area fishermen lost their business.
- Oluvil port also facing some problems. The sand is accumulating mouth of harbour, because of that the ships could not enter in to the harbour. The harbour's mouth depth is not enough to entering ships.

The photos-7 and 8 are showing the main change of coastal erosion. The coastal land eroded by triangle shape. The reason for this erosion, is the improper wave breakers. They have made without proper planning, they have paved only selected places.

There are no any space between Kali-odai and university. The erosions were happened up to university border. By this changes the fresh water fishing also affected.

The fishermen were mostly affected by this development, because of the fishing harbor development (1000 to 2000 people). They all used the motor boat for the fishing. The wave breaks were affected their boats and fishing net. More than 20 boats were broken by these stones in February second week of 2014. So, the traditional fishermen were lost their works and income like per day 500 to 3000 rupees, and also they are economically faced more problems.



Photo-3

Photo-4

In addition to the coastal erosion, the reproduction and depletion of the fishes also affected. The Eco-system of coastal area also affected by this harbour development. This area people were also depended on agriculture. In the coastal area, there were more than 4000 coconut trees planted and also they cultivated vegetable. Because of this development, more lands were eroded on the coastal area. The thirty (30) acre land is abandoned without cultivation. More than 100 meter land were retreated near sea and also more than 3000 coconut trees were destroyed by the erosion. So, they lost their monthly income and seasonal income. The people who depended on the cultivation they were economically affected without job.

Mr. Yoosub Abdullah is a fisherman, near to delta. He said that the Kali-odai River was given more benefits before the port development such as fishing income, coconut income, vegetables income, self-employment like the mats production. The month of December more erosion happening. The river delta was changed from earlier time. In these areas, the turtles were coming on seasons to lay the eggs and hatching to produce their generations in sea-shores with in the coastal vegetation. Because of the erosions these vegetation were destroyed, the turtles were not come for the reproduction.

Mr. Abdul Hatheem, is a farmer and fisherman, near to light house. He said that the light house area had more than 1000 coconut trees but they all were destroyed by the erosion. There were more than 2000 people lost their job and income. Their fishing net ripped by the stone and also the coastal main road were broken. It is also affecting the transport.

Mr. Hameed is a Teacher, near to light house. He said that there were 75 meters distance from the sea shore to coconut area before the port development, now the land has gone. Those days more people spent their free time in the beach but after the coastal natural destruction they are not coming. Their entertainment also affected. The people, who lose their land were did not given any solutions.

The Coastal land mostly affected by the garbage. There was more wastage by the port development and people activities, because of this, the environment mostly polluted.



Photo-5 Ecosystem



Photo-6 The coconut trees destroyed



Photo-7 Erosion



Photo-8



Photo-9 Pollution



Photo-10

The effects as follows

- ✚ Loss of costal barriers
- ✚ Loss of fishes
- ✚ Loss of costal vegetation cover
- ✚ Loss of one of the identity of Oluvil light house
- ✚ Costal pollution
- ✚ Loss of land
- ✚ Fishermen might happen to change their profession
- ✚ People have to change their settlement
- ✚ Loss of costal biodiversity (turtle)
- ✚ Loss of economic activity
- ✚ Loss of sand barrier

Suggestions

- Government must care the problems of the affected people.
- They have to be considered to receive job opportunities on the harbor.
- Make activities and awareness to prevent coastal erosion and pollution.
- Take action to continue the commercial harbor not only fishing activities.
- Rearrange to plant the coconut trees again.
- Protect the biodiversity & coastal ecosystem.
- Make action reproduce the coastal beauty & safe.

4. CONCLUSION

Oluvil village has a width coastal land area. It is bring many good ideas to lead to this port project. Unfortunately, it becameto facing many problems, disadvantages to human life and bring lot of physical impacts. So these affects should be reduced all sites in a significant ways.

There should be proper planning for the wave breaker systems in order to control the erosion in oluvil site. The people who lost their land, they must give the compensation to them and also must be help their job and monthly income. They must allow fishing the traditional fishermen in the sea as equal to fishing harbor.

There should be the plan to plant coastal plantation to control the erosion. There should be organized the awareness program on the coastal erosions and to control these problems in minimum level.

5. REFERENCES

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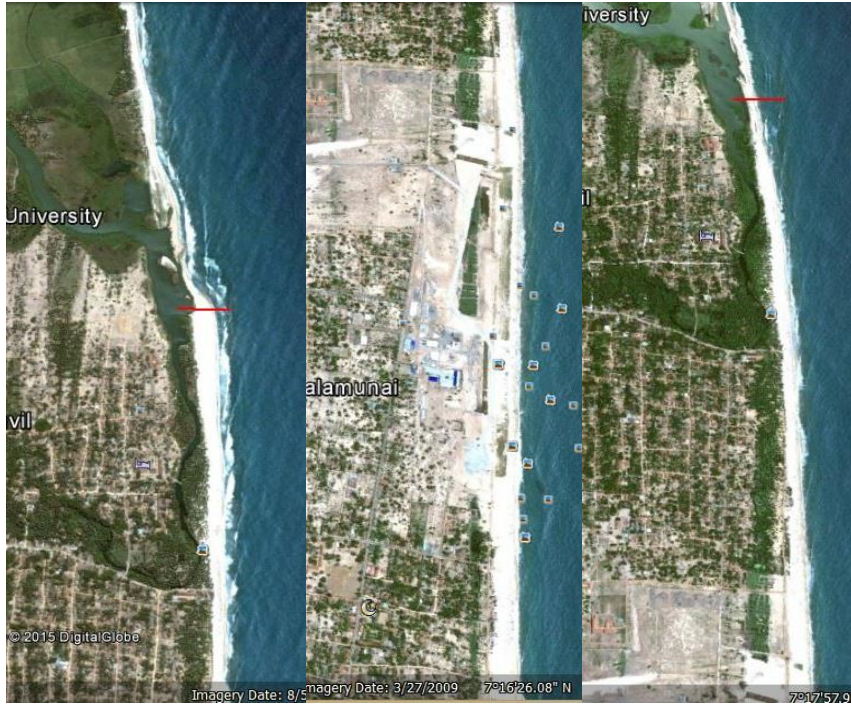
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Satellite Images Erosions Changes

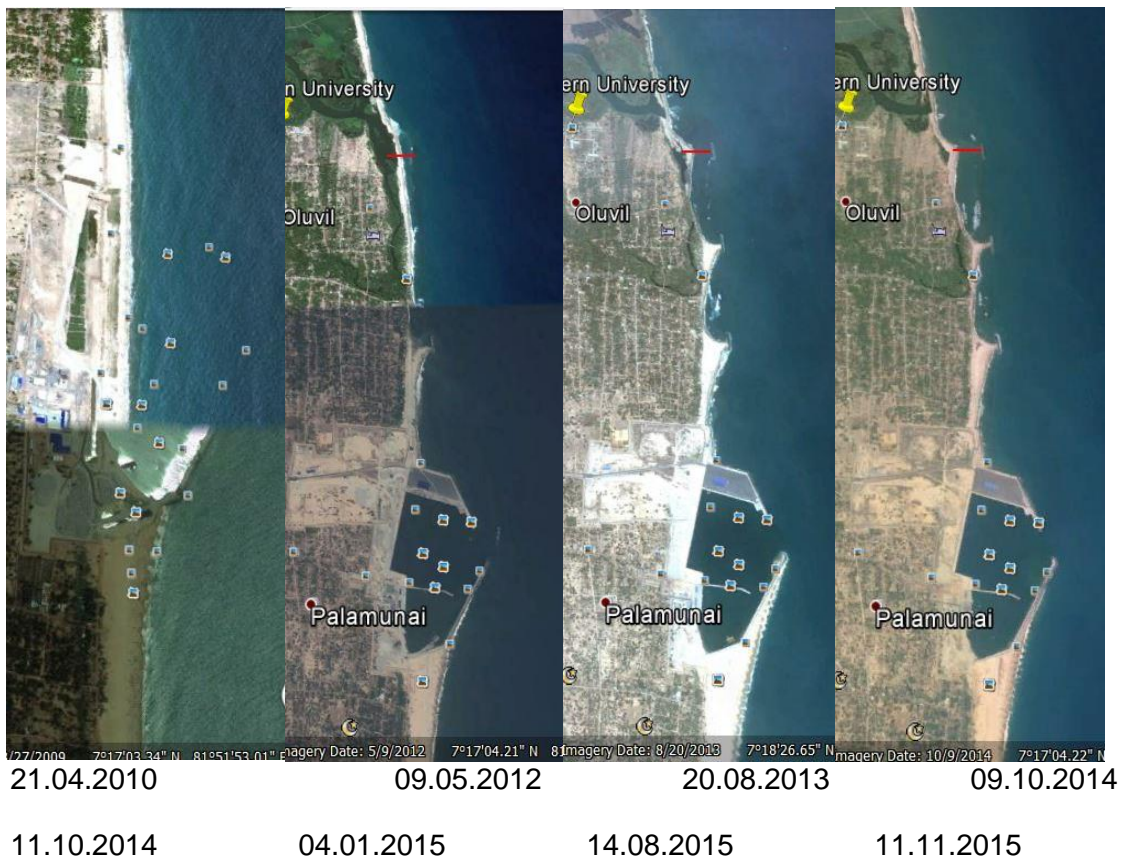
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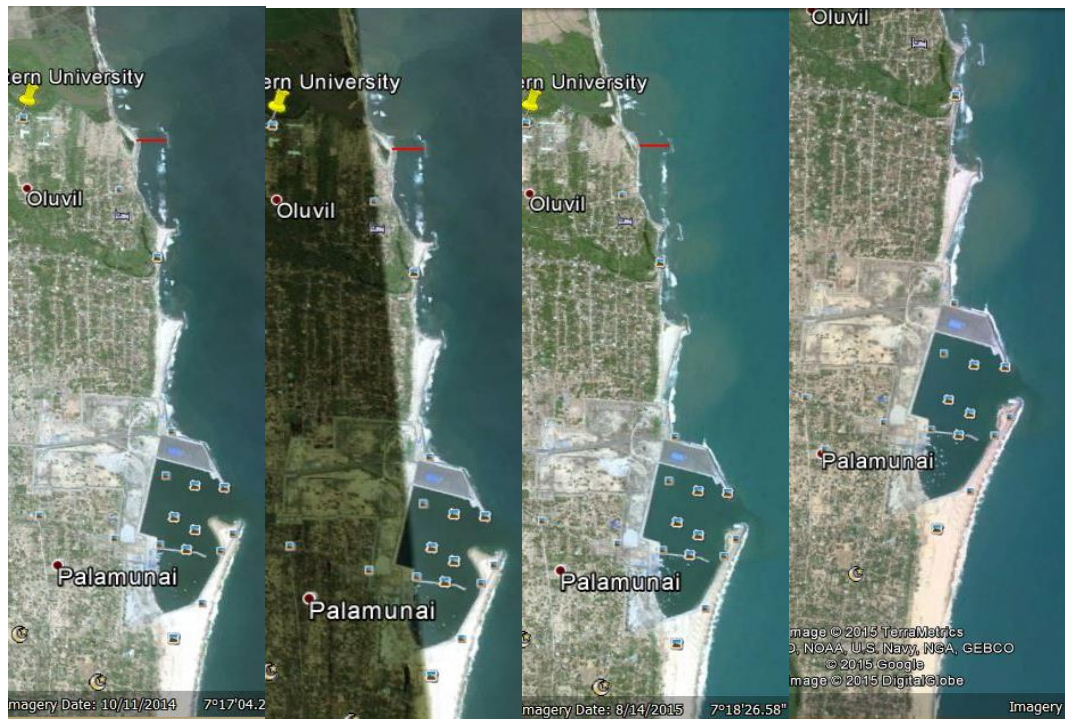
27.03.2009

03.07.2009



Harbour Area Oluvil-Palamunai





Oluvil Fishing Area Erosion

05.08.2006

27.03.2009

29.05.2010

