World of TUI

Like the Phoenix from the Ashes

Forest fires in the Mediterranean and neighbouring regions – natural environmental factor or ecological risk?

Enjoy nature – together we can prevent forest fires!

Dial 112 on your mobile phone, the Euro emergency number, or notify your TUI or Thomson Service rep!

Although most TUI destinations on the Mediterranean coasts are not directly affected by forest fires, TUI is concerned about their ecological impacts. Moreover, the fear of forest fires, smoke billowing in the sky and the reek of burning lower the attraction of these destinations.

TUI offers excursions to numerous nature parks and forests to bring its guests closer to the special beauty and natural diversity of the holiday regions. The risk of starting fires through negligence increases with the number of visitors. That's why we take our responsibility for preventing forest fires very seriously. An intact natural environment is the precondition for beautiful holidays.

We kindly remind you

- Please refrain from smoking in forests, brush and dry grass landscapes
- Please don't discard cigarette ends or burning matches
- Please do not start any open fires
- Please don't leave any glass or bottles on the ground
- Cigarette lighters belong in rubbish containers and not in the wild (residual gas!)
- Please do not park cars with catalytic converters, e.g. hire cars, on surfaces with vegetation cover, especially dry grass.
- Please report any outbreaks of forest fires immediately by phoning the 112 Euro emergency number or informing your TUI or Thomson Service rep

Fire in Serra de Monchique, Portugal

Mediterranean landscapes – shaped by fire

For thousands of years forest fires have been shaping the landscape of the Mediterranean and the neighbouring Atlantic coasts. The often long droughts over the summer turn the vegetation tinder dry and increase the risks of fire outbreaks. Since the arrival of human settlements fires that were started on purpose or through negligence have frequently got out of control. By contrast, natural fire outbreaks, such as from lightning strikes, are relatively rare. The typical shrubby maquis landscapes as well as oak and pine forests have been formed as a result of fire and human intervention.

The extreme dryness of 2003 caused catastrophic forest fires in the western Mediterranean region. In Portugal alone more than 400 000 hectares of forest and scrub went up in flames. Areas under reforestation were particularly hard hit. Prior to that there had already been repeated occurrences of large-scale forest fires, for instance in 2000 and 2001 on the Greek island of Samos. On average some 600 000 to 800 000 hectares succumb to wildfire every year in the Mediterranean. Of this about 40 percent is forest. Overall in southern Europe the area affected by forest and scrub fires has doubled since the 1970ies.

From local fire outbreak to forest fire catastrophe

Wildfires in the Mediterranean region are usually the result of wilful arson or negligence. The extent has increased considerably over recent decades and the risk of wildfires will continue to grow. The causes:

Rural depopulation has led in many areas to the abandonment of traditional agricultural practices. The decline in the cultivation, for example, of olive groves and cork oak forests is accompanied by an increase in flammable undergrowth.

Frequently, reforestation is carried out by planting easily flammable eucalyptus and pine species in monoculture stands. This increases the risk of large-scale fires.

The IPCC, the Intergovernmental Panel on Climate Change, predicts that the greenhouse effect will cause changes to the world climate. This will increase the frequency of extreme weather conditions and average wind speeds. At the same time rainfall will decline in some regions, as is already happening in the Eastern Mediterranean.

Burnt eucalyptus plantation, Portugal

Cultivated olive grove, Italy

What are the consequences?

The occurrence of wildfires as such is not a cause for concern, but rather the ever shortening intervals between the fires. Species of plants and trees with low tolerance to fire cannot regenerate and biodiversity drops. Simultaneously erosion of the unprotected soil is aggravated, which in turns lowers soil fertility. Although the particularly high biodiversity of the Mediterranean arose through the impacts of human intervention and fire, the balance has been critically disturbed over recent decades.

Fire ecology – or how much fire does the land need?

Plants and trees with a high tolerance to fire or that even depend on fire occur in the Mediterranean thanks to the relative frequency of wildfires. The scientific name for such species is pyrophytes, which literally means fire plants.

Thus the thick bark of the cork oak (*Quercus suber*) provides it with good protection against fire. This protection is lost when the bark is stripped. Harvesting the cork bark usually occurs in the summer months every nine to eleven years.

In the case of other species such as the tree heath (*Erica arborea*), the strawberry tree (*Arbutus unedo*) or boxwood (*Buxus sempervirens*) growth is stimulated by fire.

Many species of rock rose (*Cistus* spec.) need the heat produced by a fire for optimal germination. Other trees and plants survive thanks to their underground tubers and bulbs, whereas others depend on their seeds for survival. These can sprout on a massive scale after a blaze (see title photo).

Rock rose (Cistus monspeliensis)

Tree heath

The Global Fire Monitoring Centre provides information on the internet about wildfires

- Current global fire status (English):
  www.fire.uni-freiburg.de/current/globalfire.htm
- World wide information on wildfires (English):
  www.fire.uni-freiburg.de
- Information on fire ecology (German):
  www.forst.uni-freiburg.de/feueroekologie

Fire management: prevention reduces the risk of forest fires

Effective fire management is more than fire fighting and statistics. In this context optimal land use management on the basis of scientific studies is particularly important. This can help prevent or minimise the intensity of wildfires. In addition to the expansion of early warning systems (eg via satellite) Professor Goldammer of the "Global Fire Monitoring Center" in Freiburg is in favour of controlled burning of the undergrowth in certain fire-tolerant forests. After a quickly burning ground-cover fire that only raises temperatures for a short time at ground level to about 500° C has rapidly moved through the forest the local plant and tree communities rapidly recover. On the other hand fires that reach the canopy – generating temperatures exceeding 1000° C and destroying trees – are annihilating. Controlled burning is only suitable in well-spaced forest stands with little shrub growth where the fire cannot jump to the canopy. This makes experience and professional fire management essential.

Freshly stripped cork oaks with little undergrowth, Andalusia

Cork oak forest after a ground cover fire, Portugal

TUI active around the world

The World of TUI supports a number of reforestation project in Turkey (2003) and Cyprus (via agency Aeolos, 2003), and outside the Mediterranean in Kenya (1992–96, 2003), on Tenerife (1995/96) and Grand Canary (2001).

In addition TUI is cultivating its own forest near the German town Salzgitter – applying the principles of sustainable, certified forestry management. As a conservation area it represents an important regional recreation facility.

TUI cooperates in model projects

Island of Samos, Greece
In the summer of 2000 and spring of 2001 devastating fires on the island of Samos destroyed forest regions in the mountains and landscapes that had taken hundreds of years to shape through traditional cultivation practices. The economic basis for many olive and wine growers has been ruined and the attraction of the island in terms of tourism has been diminished. Against this background a soil conservation report with a catalogue of immediate practical measures was produced with support from TUI Environmental Management, the University of Münster and the conservation NGO PANGAEA e. V. The study has been made available to the responsible agencies and institutions on Samos.

On top of this, in an ad hoc action low on red tape, TUI organised the transport and hand over of a decommissioned but fully-functional fire engine to the voluntary fire brigade of Marathókampos on Samos in the spring of 2004. This will considerably improve local fire management.

Areas burned by wildfires, Samos 2001

Handing over fire engine, Samos 2004

Portugal
Serra de Monchique, a Natura 2000 site of high cultural and natural diversity on the western Algarve, was seriously hit by forest fires in 2003 and 2004. With funding from the EU the Instituto Português de Ecologia (INPECO) had helped establish the Monchique Bio-Park Network as a regional development concept. World of TUI, with the help of its guests, in cooperation with INPECO is planning to support the reforestation of the region – to participate in the conservation of this region's unique natural resources. Please contact the local TUI or Thomson Service rep for more detailed information.

Cooperation partners

The Center for Mediterranean Cooperation of the World Conservation Union (IUCN) initiates measures such as re-cultivation projects after forest fires.

Center for Mediterranean Cooperation, Málaga, Spain
Rami A. Salman, e-mail: rami.salman@iucn.org
Internet: www.uicnmed.org

TUI supports the Global Fire Monitoring Center (GFMC), Freiburg, with information gathering on wildfire risks to natural landscapes and their visitors.

Global Fire Monitoring Center, Prof. Goldammer
Internet: www.fire.uni-freiburg.de
(see also infobox on inside page)

The Portuguese Institute of Ecology (INPECO) in cooperation with ECOTRANS promotes sustainable development in the fields of environment and tourism in the framework of Agenda 21.

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Internet: www.inpeco.pt, www.ecotrans.org

Donate for a tree – together with the World of TUI!

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