UEM MAG 05/2012

The Environment and Motorcycling Sport

The respect for the environment in motorcycling events has always been considered a priority in particular among National federations and, above all, by UEM. The UEM has put in place several efforts since its birth to increase awareness among organisers in adopting measures that could help in preventing local authorities intervention, like the application of heavy limitations, if not also the prohibition, to free transit of motorcycles in environment protected and also in non-protected areas.
UEM has always been involved in searching solutions that could guarantee the regular performance of motorcycling competitions in the whole of Europe, in the complete respect of rules and dispositions of local authorities and it is continuously trying also to co-ordinate actions promoted by National federations.
Motorcycling sport should not, as a matter of fact, be seen as dangerous to the ecological equilibrium of the environment, neither as an enemy of nature, but like modern activity that strives to promote initiatives aimed at reducing the environmental impact of motorcycling, ie noise, pollution, soil disruption for motorcycles passage.

Cover photo: Solar energy at Vallelunga circuit

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Meeting of the UEM Environment Commissions

UEM is involved since many years also in favouring energy savings in sporting competitions and in the adoption of solutions on tracks that are compatible with the respect of the environment.
The Environment Commission chairman, Mr Adamo Leonzio, is an engineer involved since many years in designing new facilities for the motorcycling sport and in assessing the sustainability under the environmental point of view. He wanted to offer to the readers of the UEM Mag some examples of what is possible to do to limit the damages of the pollution on off road and on-road tracks.
For sure in Europe exist many other examples like the one mentioned here and we will be happy to report them in one of the next UEM Mag issue.

Monitoring the studies and THE new technologies, which are being developed around the world in the field of environmental protection, is among the main aims of the Environment Committee of the UEM, together with the evaluation of which one of these may apply to the motorcycle activity.
In the following document, the Commission intends to bring to the attention of all concerned some new applications in the field of environmental protection that are, in the opinion of the same, very important, and above all that can be replicated or operated by any person

Adamo Leonzio, author of this article and chairman of UEM Environment Commission

who, in a manner to another, is dealing with environmental respect in the world of two wheels.

OFF-ROAD MOTORCYCLE ACTIVITY – A DIFFERENT APPROACH

At the end of last year, the UEM Environment Commission was informed from the Swedish member Mr Kjell Ericsson, that the SVEMO, in cooperation with HUAros AB and Prof. Nils Ryrholm of the Faculty of Engineering and Sustainable Development - Galve University, was developing a study that will show a different approach to the off-road activity of the motorbikes towards the environment.
The study starts from an issue addressed during the 2010 conference on biological diversity held in Nagoya (Japan) that pointed out how the number of species at risk of extinction was increasing and, considering that this represent

Electric bike riding at Skutskär, a track with very high biodiversity (Source: SVEMO)

Most tracks have topographical differences that allows the formation of slopes in different directions, which creates opportunities for a varied biodiversity - both during wet and dry years (Source: SVEMO)

one of the major environmental problem, the necessity to improve the quantity of land in which these threatened species could survive. Actually the majority of land are utilized for farming, forestry if not as industrial or dwelling landscape and all these utilization are the worst for these species. What they need are lands not utilized for any kind of human continuous activity but that are not completely still because to favourite their life, they need a "continuous disruption" of the soil, the one that in the past was ensured by the hooves of the big animals.
In this scenario fits the different approach to the motorcycle off-road activity, because test carried on in some motocross circuits in Sweden, have shown that the wheels of the bikes have acted as big animals hooves, disrupting the soil creating the condition for these threatened species to survive and multiply.
This project has a strategic importance for the continuation of off-road motorcycling because it allows to demonstrate that our sport is not fully incompatible with the environment, but has also

Edge-zones creates opportunities for plants that need a lot of sunlight (Source: SVEMO)

Even for example speedway and asphalt tracks can use their open surfaces for biodiversity. Airports in Finland use this knowledge (Source: SVEMO)

Electric bike creating dust that helps to mineralize the environment helping plants taking up important trace-substances in the soil (Source: SVEMO)

Solar panels at Vallelunga track

positive aspect. This does not mean that we should not in any case work best to reduce the negatives and enhance the positives aspect, but it shows that we are not those "devils" to the environment as some parts of our society consider ourselves.

ENERGY SELF-SUFFICIENCY - THE EXAMPLE OF VALLELUNGA CIRCUIT

One of the fundamental aspects to raise environmental compatibility of sport motorcycle is that on one hand to lower as much as possible the energy needs of the sports facility and on the other hand to produce the energy required with environment friendly methods.
The first category includes all those technical solutions, such as the use of devices with high energy efficiency and low energy consumption, the choking of systems with the possibility of separate use of the various constituent parts of the complex, the avoidance of waste of energy taking into function only facilities etc. are strictly necessary.
Belong to the second category all those devices that make it possible to produce the energy required in its production systems using environmentally friendly. And in fact it is intuitive that if we don't buy energy from external suppliers but then we produce it using power generators that use fossil fuels as an energy source, we have not solved the problem, but we have worsened because the level of pollution resulting from the production of this energy is certainly greater, for reasons of efficiency, to that resulting from production in power plant.
Among the various methods currently used for the production of energy in its own, what certainly goes for the greater is the use of photovoltaic. In fact, if we look at the normal shape of the permanent circuits in which the motorcycle activity takes place, we realize that the not used areas around the track, the wide open spaces of the paddock and car parks,

The Vallelunga circuit. The arrow shows where the photovoltaic cells have been placed

make it extremely easy placement of photovoltaic panels and using them as roofs of buildings , grandstands, parking, or laid them directly on the ground.
An example of this comes from the circuit "P.Taruffi" of Vallelunga, near to the city of Rome in Italy.
This circuit is in fact a circuit with zero impact from the energy point of view because the owner of the circuit has created a photovoltaic plant inside the facility, capable of producing 1.2 million kWh in a year equal to about 30% more of the total energy required for the management of the entire complex.
In this way, while making a good deal (the energy produced in excess is sold on the market) has also avoided to introduce in the atmosphere something like 625 tons of CO2 each year.
It is clear that was not deleted all the CO2 produced in the activity of the system because, at least as long as there are means of transport that use fossil fuels (motorcycles, cars, etc.) to produce the energy needed to move them, there will always be a portion of emissions not eliminated but has nevertheless made a significant step forward.

NOT ONLY CARBON – THE MUGELLO INNOVATION

Speaking of gaseous emissions harmful to the environment, the attention of all users of our world has so far mainly focused on the problem of CO and CO2 from combustion engines of motorcycles and all other vehicles and equipment in the circuits.
In fact, the emission of CO2, CO in the atmosphere is one of the aspects of pollution that are of concern to all human activities because they are primarily responsible for the greenhouse effect that, according to the scientific world, are causing significant climate change.
This focus has led to the Carbon Credit project (offsetting with planting trees), to studies carried out by national federations to evaluate the possibility of reducing emissions, to search of alternative sources of energy to the fossil fuel for their production, to stimulate the development by the manufacturers, motorcycle of alternative energy (electricity, biofuels, etc.), to put pressure on the teams and the organizers to use more and more service vehicles electric powered during events.
But the problem of emissions is more complex and is not just limited to those of carbon compounds. In fact just as dangerous to human health and the environment are all compounds of nitrogen (NOx), the so-called particulate matter (PM10) and VOC (Volatile Organic Compound). All these elements, we also develop with the use of fossil fuels as an energy source but also, especially the PM10, with the consumption of the brakes, tires, asphalt, etc. and are therefore linked fully with our activity.
Fits into this perspective, an initiative of the management of the International Circuit of Mugello, Italy, that in implementing the new grandstand overlooking the start finish straight, not only has positioned on the roof of the same a quantity of photovoltaic panels capable of producing 250.000 kWh in a year, but has also paved the platform with ceramic tiles able to degrade, transforming them into harmless compounds (nitrates, sulphates and carbonates), both nitrogen compounds that other components mentioned above and also,

Tiles in grandstand of the International Circuit of Mugello

albeit minimally, the compounds of carbon.

This ability to degradation of the aforementioned parts, certified by University Institutes of primary importance, is based on the function of the photocatalyst own Titanium Dioxide (TiO2) that causes an area of 100 square meters of this type of tiles has the same ability to degradation of a foliar surface area of 22 square meters corresponding to approximately 30 trees

New tiles in the International Circuit of Mugello

Adamo Leonzio

Chairman of the
UEM Environment Commission