FAI Safety Expert Group, intentional letter

Dear Friends

Establishing a group of flight safety in air sports
is an excellent idea. Accidents during FAI sport events,
National, Continental and World Championships are
much more seldom than during popular, touristic
or recreational flights. However they happen anyway
and we should try to reduce its number as much as possible.

In my opinion the first phase of our work has to be
creating of some kind of data base collecting all
known accidents, happened last years in all disciplines
of air sport: g.a., gliding, parachuting, balooneing,
hanggliding and paragliding, microlight and paramotor
sports.

Matter of my interest are microlight and paramotor
aviation. I have knowledge of accidents and dangerous
incidents occured since 1996 on number of Polish Nationals,
European and World Champinships, mostly on microlights
(trikes anmd ULs) and few cases happened on paramotors.

I propose to ask every member of the Group to write
and send information on known accidents, happened
on FAI competition, including following data:

Sport event (year and venue).
Category of aircraft.
Consequences for crew / pilot (Death, injury)
Damage of aircraft
Investigation of accident (State Commission, Police,
Event Organizers or others)
Short description of circumstances and reasons
either official (eg State Commission Report)
or known from creditable sources.

With regards

Jacek Kibinski
Polish Delegate to CIMA
Expert of Polish State Commission
of Aviation Accidents.

**Initial data of database for microlights
are attached below (3 pages).**

J.Kibinski

ACCIDENTS AND DANGEROUS INCIDENTS
ON FAI WORLD AND EUROPEAN CHAMPIONSHIPS

FATAL ACCIDENTS

1. First Air Games Aydin, Turkey, 1997
ULM, coming from Asian country, crashed in test flight before beginning of the competition.
Probable reason : mistake in assembling the aircraft after transportation.
No more details are known.

2. European Paramotor Championships, Chosas de Abajo, Spain., 2006
Pilot of RPL1 successfully finished the last task – straight distance flight with limited fuel.
He refueled and started from a field. Ascending on low altitude he met strong turbulence above contrasting surface (river, sandy shore). The wing collapsed, altitude was too low to launch recovery parachute. Pilot died soon after.

DANGEROUS INCIDENTS AND EVENTS

3. European Paramotor Championships, Nagykanizsa, Hungary, 2002

Stormy weather came during a task. Pilot of RPF1 (PPG) approaching landing met strong turbulence. The wing collapsed, he fortunately felt on tree. He was examined in hospital but no significant injury was diagnosed.

4. World Microlight Championships, Long Marston, UK, 2003

One outlanding an navigation task was planned on a farm field with rough surface. One of landing ULM (RAL1) was abruptly stopped by front wheel and stood on nose in vertical position. Then fuel from the tank in rear started to flush the pilot. He would have no chance in case of fire, but fortunately nothing happened. Pilot and aircraft remain OK and continued competition.

5. World Microlight Championships, Levroux, France 2005

Pilot of ULM (RAL) approached probably out of fuel on low altitude successfully jumped above power line, then stalled and recovered but slightly too low and hit the ground. Aircraft crashed, no information on pilot"s injury.

6. World Microlight Championships, Usti, Czech Republic 2007

Pilot of trike (RWL1) finishing economy task approached out of fuel and grounded safely just before limit of airfield, result zero scoring from the task. However, if the fuel would finsh few hundreds meters before, he could seriously crash because approaching route from this direction crosses village located in deep canyon (rocky slopes, trees, road, railroad, power lines, buildings)

where safe landing is impossible.

7. European Microlight Championships, Leszno, Poland, 2008

Finishing precision landing task pilot of trike (RWL1) hit ground with front wheel. Front suspension broke causing rolling forward. Aircraft was fully destroyed, pilot"s injury almost none – small scratches on fingers. Risk of fire, however, was really high.

The case, classified as Accident, has been investigated by Polish State Commission, PBKWL *) final report no 604 / 2008.

Reasons: Force landing to get better result in the task, probably front wheel suspension was not properly repaired after previous damage.

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*) State Commission for Aviation Accidents, Warsaw.

DANGEROUS INCIDENTS ON POLISH NATIONALS

8. Polish Microlight Nationals, Jelenia Gora, 2004.

Trike (RAL2) engine stopped during takeoff on economy (limited fuel) task. Pilot tried to land on straight route but stalled and crashed from few meters. Aircraft was seriously damaged, no injury of flying crew.

The case, classified as Accident, has been investigated by Polish State Commission, PBKWL final report no 123 /2004.

Possible reasons: cutoff the engine because of improper sealing the tank, obstructing ventilation hole; opening full throat when heads temperature did not rise proper value.

CONCLUSIONS AND RECOMMENDATIONS

1. Economy tasks (fliying task having certain amount of fuel) are specific for microlights and paramotors; the task could include flight duration, flight distance and speed.

Economy tasks are one of the most interesting for competitors, requiring high performance of aircraft and excellent knowledge and skill of pilots, because, to get good result he must use not power of engine only but also technique applied gliding and hang gliding.

Some pilots are trying to use engine as long as possible, landing "on last drops" or do not reach airfield. Such flight is normally scored zero but outlanding on wrong place could be dangerous (case 5, 6).

Pilots landing after economy task must have amount of fuel sufficient for approaching round and safe landing.

Proposal 1:

Measuring fuel remaining after landing. The procedure allows measurement and possibly additional scoring pilot who used less fuel flying task. The method looks the best in results but causing lot of organization and technical problems. Practically it can be applicable for light paramotors (PF1, PF2, PL1) where power unit can be separated from

thewing and weighted on scale with sufficient accuracy.
Measuring of remaining fuel for microlights could be done only by draining tank, which is time consuming and require additional marshals.

Proposal 2

Economy task should not finish by landing, but be supplemented by additional task and / or obligatory maneouvers around airfield. For example, on EMC 2008 in Leszno pilots returning from economy task must land on deck (main or emergency) and have fuel for taxing from deck to Apron. Only one pilot did not fulfill this requirement.

2 Planned outlandings

Dividing navigation tasks for two or more separate legs allows organizing interesting, long flights in various area. Outlandings are planned at known places, where additional fuel supply can be arranged. However, outlandings has to be to planned only on operating, carefully checked airfields, to avoid problems with rough surface as well as location in unknown place difficult to find driving.

Light, foot launched paramotors RPF1, RPF2 can mostly land on small area, but it does not concerns heavy ones RPL1, RPL2 For this reason planning such task as "Straight distance flight with limited fuel " (see above pos. 2) in my opinion is not acceptable.

3 Paramotors in turbulence

Paramotor wing is very sensitive for turbulence, we know number of accidents (not in competitions) when pilot crashed after wing collapsed in turbulent air. If flight altitude is sufficient, recovery parachute helps and should be obligatory in competition It does not help, of course, when competitor flights just above ground, in various versions of slalom. Then parachute is useless and reduces fast control capability, competitors prefer to remove it However, in some paramotor competitions organizers join "low flight" tasks with other ones, where pilots fly in open air (economy, navigation).

For safety reasons joining this two types of tasks is not acceptable.

Pilot can be allowed to fly without recovery parachute flying slalom tasks above the ground, but flying free. must by obligatory equipped with the parachute.

Krakow, July 2012 **Jacek Kibinski**