Answers drafted by:

- The Independent Parliamentary Group set to investigate and establish the causes of the April 10^{th} , 2010 Polish Air Force Tu-154M crash in Smolensk

1. Is it possible that the plane lost part of its wing after supposedly hitting a birch tree, taking into account, firstly the location of this tree and secondly its thickness, wood density, airplane speed etc.?

Virtual parametric experiments conducted so far by professor Binienda demonstrate that in the conditions described in the report drawn up by the Miller's Committee the wing of Tu-154M could (not?) have been ripped away as a result of the collision with the above-mentioned birch. Many important pieces of evidence confirm these test results. Primarily the pictures of the front edge of the slot of the left wing prove that there was no damage in the area of hypothetical crash of Tu 154M wing with the birch as indicated above.

The fact that the birch fell down perpendicularly to the flight trajectory also contradicts the hypothesis on the breaking of the birch as a result of the wing impact. This hypothesis can be also refuted by the presence of wood splinters at the breaking point of the birch. Also material tests of the birch fragment from the accident site presented by Professor Chris Cieszewski at the 1st Smolensk Conference and published in the scientific journal entitled MCFNS indicate that the birch tree trunk strength was lower than the average. Moreover, the expert's study prepared by the ATM company, a producer of the Polish black box states that the Tupolev wing most probably fell off approximately 120 meters behind the birch. The fact that none of the witnesses saw the aeroplane lose the wing as a result of this hypothetical crash with the birch is also worthy of note.

The SACIAA (State Aviation Committee for the Investigation of Aircraft Accidents) did not perform any calculations which could confirm the trajectory during which the aeroplane hits the birch with the wing and the investigators from ATM company appointed by the Prosecutor's Office after having calculated the vertical trajectory adapted it to the traces on the trees. The Parliamentary Team has at its disposal aerodynamic calculations made by G. Jorgensen, M.Sc. Eng., based on acceleration recorded by the black boxes; they indicate that the plane did not have any contact with the birch at the altitude indicated by the committee.

The question of the lost wing could be resolved in an unequivocal and undisputed manner by examining the airplane wreck using scientific methods. Unfortunately, there is no political willingness to proceed with such examination and independent resistance tests are blocked in Poland in a very simple way: they do not receive any funding, which in fact can be granted by the government.

2. Could the aeroplane after an alleged crash with the tree at an altitude of a couple of meters - lose the wing, rise again and perform the so-called barrel roll?

If the aeroplane loses a significantly large part of the wing, the imbalance of bearing forces can cause it to roll and lose some of the bearing force, which should lead to the flight descent. According to the data presented by both committees, the Tupolev started to roll at the end of the flight and it fell to the ground with its landing gear upwards. Both committees elaborated their opinion only on the basis of the traces which, as they stated, were left on the tree-stand by Tu-154M. Not only did they conceal the last record of TAWS (#38), which ruled out the possibility of the performance of "the barrel roll" during which the aeroplane was to change the trajectory of the flight by 10 degrees even before the TAWS point #38, but they also removed from the readings of both black boxes (the Russian and the Polish one) the records made half a second after the TAWS. The roll described in the reports prepared by the IAC (Interstate Aviation Committee) and SACIAA (State Aviation Committee for the Investigation of Aircraft Accidents) has not been confirmed by the data saved on flight parameter recorders, eye witnesses and the Russian inspection report from the site of the accident from April 10th, which did not describe the characteristics trimmings of the trees, damaged when the aeroplane was flying almost with its wheels upwards (according to the committee). Also the aeroplane position given by the Miller's Committee upon the first crash to the ground does not comply with the traces left on the ground, which are clearly visible on satellite pictures (two parallel furrows).

3. How is it possible that the aeroplane, falling from an altitude of a couple / ten-odd meters with the speed of app. 270-280 km/hour, could completely crash when hitting against the muddy ground?

Both the experiment with B727, which crashed when flying in a controlled manner in a normal position on the Sonora Desert and the virtual experiment performed by professor Binienda, showing the behaviour of Tupolev crashing against the ground in an inverted position indicate that such destruction of the aeroplane as a result of hitting the muddy ground is improbable.

Tu-134 in Kirgizstan, Tu-154 in Delhi or MD-11 in Newark behaved similarly to professor Binienda's computer model. In the case of DC-10 in Sioux City, which fell to the runway at a banking angle, as a result of which the fuel exploded and the wing centre section was stopped in the inverted position; the fuselage was not subject to such fragmentation as in the case of the Smolensk crash: 113 persons died and 178 persons survived. It should be remembered, however, that each crash has its specific characteristics. The accidents in which the aeroplanes were not subject to the fragmentation which occurred during the Smolensk crash are often compared with it. The crash of Afriqiyah Airways Flight 771 in Tripoli is one of them. Still, a significant degree of damage of this airbus was mainly the result of the machine hitting the ground at high speeds (at horizontal speed of 480 km/h and vertical speed 22 m/) and the outbreak of fire after the crash to the ground. The destruction level similar to the one in Smolensk occurred in the case of DC-9, which fell to the Everglades moors, however at the speed almost three times higher from the governmental Tupolev (740 km/h).

On the other hand, scientists in Poland for over a year have pointing to the fact that the fuselage was torn apart and bent outwards and not crashed; some of its fragments were thrown far to the sides of the flight trajectory while the aeroplane was still in the air, which shows that the explosion also contributed to such degree of the aeroplane destruction apart from the crash against the ground.

In recent weeks it turned out that already on April 10th and 11th the Russians identified a ten-odd fragments of the aeroplane app. 100 metres before the accident site, which they described as the remnants of the fuselage, which also makes the minister Jerzy Miller's version, according to which the aeroplane which crashed against the ground was deprived of the wing tip, but it was fully operative, quite questionable.

4. Haven't some people survived similar crashes? The aeroplane with the president of Mozambique crashed when hitting the mountain side at the speed of app. 400 km/h at an angle; still. Some passengers survived. It happened in the 80s and the aeroplane was Tu-134, a machine with a structure similar to the Tu-154.

It should be stressed that each aeroplane accident is unique and it should be examined individually. When comparing the crashes one should not only be acquainted with their similarities, but also with the differences between them. The only useful tool in the case of such analysis is the statistics, and the answer gives only some degree of probability.

Most often everybody present on board dies when the crashing plane falls down with a huge energy or when it explodes, or when its fuel ignites. Even in the crash of the Tripoli aeroplane one passenger was able to survive. Already in less than half an hour after the Smolensk crash the minister of foreign affairs knew that "everybody died" and all rescue services were trying to conceal that they were not working: they did not even bother to pretend that they were searching for the injured and that they were trying to help the victims. Some of the ambulances were turned back already approximately 15 minutes after the tragedy, since it was determined that there was nobody to be rescued. Still, there are statements of a number of witnesses which indicate that three persons survived the crash. The Miller's Committee has not analysed this version.

5. Do you consider that the wreckage examination, its protection, the protection of the area and its inspection aimed at finding the remains of the victims as well as any evidence was adequate?

The wreck was not examined by the Polish expert's at all, which was confirmed at the Conference in Kazimierz upon Vistula by Ph. D. Maciej Lasek himself. According to him the Committee's work did not require the inspection of the crash site or the wreck. In order to determine the cause of the crash the SACIAA only needed to examine the Tupolev flight trajectory until the moment of the crash against the birch, and even this was not performed correctly. The Committee was not able to measure the birch or to even to analyse in a correct manner the behaviour of the crew and the aeroplane before it crashed against the trees. No attention was paid to the fact that the

flight parameters diagrams indicate that the pilots started to level out the flight using the yoke sufficiently early.

The superficial methodology of work of the Miller's Committee is confirmed by the fact that it did not interrogate even one witness, since, as its chairman said, "*the task of the Committee is not to interview the witnesses, but to analyse the black boxes*". It should be stressed that such assumptions were not imposed upon the Poles by anyone, but they were voluntarily adopted by them. In the face of such approach of our investigators it is hard to debate whether the tests were sufficient, since they did not take place at all.

The modus of operation of the SACIAA in this case contradicts the investigation methodology of aviation accidents, which was discussed by one of the chief Polish experts on aviation accident investigation, Antoni Milkiewicz, Ph. D., Eng.: "The methodology of aviation accident investigation, regardless of the hypothesis as to their causes, requires a thorough investigation of the aeroplane wreck. It must be carried out. This is only one of the Committee activities. Initial tests are conducted on the accident site without moving aeroplane parts. The technical sub-committee should conduct the tests on the crash site, document everything in the form of pictures and videos, mark their position in relation to one another and prepare a very detailed sketch of the accident site, etc. Only then can the sub-committee chairman agree to the collection of the remains. This decision must be approved by the Committee chairman, who manages the issue of the removal of the remains from the accident site."

The Russian side was responsible for the area protection and inspection, whichcontrary to the statements by the minister Ewa Kopacz made in the Sejm- did not act with due diligence in this respect, which is confirmed by the fact that human remains could be accidentally found long after the crash on the wreckage, and aeroplane parts were moved, transferred and stolen shortly after the crash. Not only such actions do not comply with the methodology mentioned by Ph. D. Miłkiewicz, since the wreck elements were moved or transferred before the stocktaking, but it even happened that the Polish Committee members did not have the photographic materials from the wreckage from April 10th at their disposal. What is even worse, in one of annexes to the final reports they were not shy to admit that they were not aware whether such materials existed at all:

"Between 11-13 April 2010, 24 hours after the crash Polish experts were allowed to inspect the accident site and to make the pictures. Collected photographic materials was not gathered with a view to documenting the condition of the aeroplane wreck immediately after the crash (which was <u>surely</u> made by the Russian committee), since many aeroplane elements had been transferred during the rescue action or their position was changed as a result of tests conducted by the Russian Committee"

The issue of examining the wreck became the subject of a shameful squabble between the Polish representative accredited by the IAC, Colonel Edmund Klich, and the experts forming a part of the SACIAA. While Klich stuck to the version that the wreck was examined, although it was *"rather the inspection than the investigation"*, the Committee members in a letter to minister Grabarczyk complained that they could not terminate the tests of the remains of the aeroplane, since the Russians did not allow them to complete them. It is obvious that such behaviour is far from being professional. The works conducted upon the order of the Prosecutor's Office by its investigators who travelled a number of times in order to examine the wreck do not look much better. The general test quality is confirmed by the fact that recently personal belongings of the victims have been found, which were present inside the wreck for nearly three years.

6. Do you know which Polish experts were on the crash site and which tests were conducted immediately after the crash (and if so, at what time and on which day were they conducted)?

Already before the arrival of Polish specialists at 3:30 p.m. Sergey Shoygu, the Russian Minister for the Emergency Situations informed the press that the analysis of the black boxes is underway. It was a very characteristic statement, since it confirmed that the Russians initiated their own activities at the site of the crash without the participation of the Polish side. Already late in the evening they showed the Poles the recorders on the crash site and they maintained that the recorders had not been touched.

Polish military prosecutors (including K. Parulski and Z. Rzepa) appeared on the crash site on April 10th at app. 6 p.m. and Edmund Klich with his collaborators appeared at app. 8 p.m. after having been held up for two hours by the Russians in the aeroplane. On the first day the Poles did not conduct any tests, but some of them escorted the cardboard boxes containing the black boxes, which according to the Russians had just been lifted from the wreckage, to Moscow. Nobody from the Polish side checked the contents of the cardboard boxes and especially if the recorders which were allegedly placed in them contained any tape.

Since officially the works on the black boxes officially started in the morning of April 11th, this means that the Russians had them at their disposal for almost 24 hours, during which they were not controlled by the Polish side. Polish specialists in Moscow didn't even have photo cameras and they had to rely on the Russians in every aspect of their work. Colonel Rzepa mentioned that he had participated in the playback of the sound records... without the headphones.

Polish prosecutors did not participate in post-mortem examination of the corpses, except for the post-mortem examination of one person: Lech Kaczyński, the President of the Republic of Poland.

The specialists from the Flight Safety Inspectorate at the Ministry of the Defence under the direction of the Inspectorate Head, Colonel Mirosław Grochowski (Bogdan Fydrych and Antoni Milkiewicz with the team) arrived in Smolensk on April 11th, bringing photo cameras and specialist equipment. The Poles could move around the site of the crash only in the presence of the Russian soldiers and they were informed about that condition by Aleksiey Morozov form IAC [10]. They participated in documentation works on April 11th and 12th, although they did not have access to all the sections.

7. Could the appointment of an international committee or the resumption of the SACIAA works bring anything new to the case, and if so, what would that be?

Unfortunately, the SACIAA in the present personal composition published the final report despite not having received over 150 pieces of evidence from the Russian side, which it had applied for. The missing evidence has been listed in the Comments of the Republic of Poland to the IAC Report dated December 19th, 2010. The most important materials which were not made available to the Poles by Russia included:

- original flight recorders of the Tu-154M aeroplane,

- the results of biochemical and toxicological tests of the crew and the persons present in the cockpit,

- forensic medical reports from corpse post-mortem examination (inspection) of the corpses of the crew members and persons present in the cockpit

- the statements and notes from the interviews with accident witnesses,

- photographic and video documentation of the aeroplane wreck from the accident site, documenting the process of the remains transfer,

- photographic and video documentation of the aeroplane wreck from the accident site, documenting its reconstruction,

- photographic and video documentation from the accident site made immediately after the crash,

- photographic documentation documenting the conducted inspections and activities performed at the accident site,

- the protocol of inspection of the accident site,

- the interrogation of persons responsible for the security of aeroplane flights on April 7^{th} and 10^{th} as well as the dispatchers, conducted by the Prosecutor's Office of the Russian Federation,

- video records from the station of the landing zone head.

In such a situation it is hard to imagine that the same people who signed the report drawn up without the knowledge of evidence could investigate the same accident for the second time.

Of course it would be best if the causes of the crash could be investigated by the international committee, although without the access to the wreck and the black boxes it is impossible to determine the course of events in in an unequivocal and undisputed manner.

8. Were the tests conducted during post-mortem examinations and after them as well as the tests of the aeroplane remains detailed enough in order to confirm or rule out the possibility of explosions on the board of the aeroplane?

According to our knowledge they were not detailed enough, although they brought a couple of findings which seem to confirm that an explosion in fact has taken place. Of course the matter discussed here is very sensitive; additionally some statements issued by the Prosecutor's Office on the post-mortem examinations introduced unnecessary

confusion and it seems that they were issued in order to calm down public opinion rather that inform it in a reliable manner. It should be mentioned that a dozen or so persons were subject to very high temperature, and at least two victims that had not been diagnosed with lung diseases during lifetime presented signs of oedema in postmortem reports. If we take the above facts into consideration, public affirmations of one of the SACIAA members, Stanisław Żurkowski, who claimed that none of the victims had presented signs of explosion or fire, confirm at best that he is incompetent or that he has not been acquainted with evidence, and in the worst case that he intentionally tried to mislead public opinion. It is incomprehensible, since the members of the Miller's Committee were aware at which point of the wreckage explosions and subsequent fires took place and where the victims' bodies found. In this scope the Committee used the materials submitted by the Prosecutor's Office and it had to be aware that at least one victim presented the signs of burns. It turns out that Stanisław Żurkowski, when presenting his statement to the press on October, 31st, 2012 gave information which was far from the facts and the evidence.

Additionally, no forensic medicine specialist was the SACIAA member. Therefore it is hard to expect that the Milller's Committee could conduct reliable investigation in this area, indicating the actual course of events, given that it omitted such important evidence as the victims' corpses and the accident site inspection reports of April 10th, 11th and 12th, 2010, and given the lack of a competent specialist. In such situation the easiness, with which the Miller's Committee ensures that there was no possibility of explosion is quite surprising, especially given the fact that the detectors used by Polish investigators in Smolensk displayed the alarming quantities of many high energy compounds and the suit of the deceased Ewa Bąkowska examined in the USA bore the traces of 2.4DNT.

Of course post-mortem examinations repeated in Poland present increasingly lower probative value due to the passing of time. Also the unwillingness of the Prosecutor's Office to co-operate with M.D. Baden, a foreign forensic expert, and the lack of national specialists with significant experience in the area of investigation of large-scale aviation accidents and in the impact of explosives on the human body makes us look at the results from the repeated forensic medical examination in a quite sceptical manner.

The lack of tests for the presence of explosive materials on the victims' corpses and the clothing which had been removed from them also gives food for thought. Moreover, initial confirmation of the presence of the explosives on the wreck by the Prosecutor's Office (the Statement of the Chief Military Prosecutor's Office dated 22.04.2013) ultimately undermines the credibility of Russian tests in that area and the tests conducted in Poland for the needs of the Miller's Committee.

It should also be reminded at that point that none of aeroplane wreck elements was tested for the presence of explosives at the stage of preparation of the Miller's Committee report. Only a few of personal belongings of the victims were examined. Therefore the probation value of such examination with reference to the presence of explosive materials in the wreck was raising doubts from the very beginning.

Unfortunately, I have to conclude that the fullest (within the scope of available possibilities) known analysis of one of the wreck parts was conducted not by the institutions of the Polish state, but by the independent researcher, Professor Jan Obrębski. His diagnosis, presented at the Smolensk Conference in 2012 was

unequivocal: the aeroplane fragment, which was torn apart, bulged and covered with soot on the inside, was ripped away from the aeroplane by an explosion.

9. In your opinion, to which degree can the IAC committee be described as an independent, international and credible institution, the actions of which are free of conflict of interest with reference to the Smolensk crash case?

- The IAC is an institution operating under the Commonwealth of Independent States. Its credibility is confirmed by the Resolution by the Russian Duma of 2003: "The IAC does not contribute to the increase of safety of aviation traffic. As an international organization it is exempt from taxes, and at the same time it draws huge profits from issuing aviation certificates. Simultaneous awarding of the certificates and the determination of the reasons of accidents led to the situation in which the main reason of aviation accidents determined by the IAC became the human factor. Thus the Committee evades the responsibility for aviation accidents and it transfers it onto the aeroplane crews. The activity of the IAC on the territory of the Russian Federation does not serve the interests of the country".

Also in the case of the Smolensk crash the IAC was involved in a clear conflict of interests, among others because it certified the sites in Samara where the Polish aeroplane was repaired. Any cause of the crash different from the pilots' fault would mean problems for Russia- starting with the financial ones (in the case of equipment failure) and ending with the political ones (if the attack hypothesis was confirmed).

10. Are there any other institutions / centres that are in your opinion competent and credible in the area of aviation crash investigations, especially in the view of the fact that our country is a member of NATO and the EU?

Such centres do exist both in the EU and NATO structures and also in the USA. This, however, requires the initiation of specific measures by the government of the Republic of Poland on the international stage. We have been appealing since the beginning of our activity for the appointment of the international committee and the participation in the investigation led by independent experts. However, the authorities of the Republic of Poland ignore our appeals, and sometimes even openly refute them.

Answers drafted by:

- The Independent Parliamentary Group set to investigate and establish the causes of the April 10^{th} , 2010 Polish Air Force Tu-154M crash in Smolensk