



How safe is Türi-Tori Downriver Race?

I shall try to analyse in this article the possible dangers lurking for paddlers on the river and how to avoid them.

First of all, a few words about the race itself.

The 78 kilometres long Türi-Tori Downriver Race is a recreational sports event for all floating vessels moving by muscle power. So far we have seen kayaks, canoes, rowboats, inflatable boats, rafts and water bicycles. The competition takes place in spring when water level is the highest and flow the fastest. Fast flowing river offers excitement and rapids test your skills – and that is what the paddling marathon is all about. In Estonia, however, early spring is the only time offering these conditions.

What are the factors contributing to dangers on the river?

Let us analyse the three main factors that also influence each other:

- the environment in which the event takes place;
- participants with various levels of skill and experience; and
- equipment.

The environment

Türi-Tori Downriver Race takes place in early spring when the daily air temperatures tend to vary between zero and some ten degrees above zero. It may rain or there may be sleet or hail coming down from the sky combined with heavy wind – or it may be a beautiful spring day. The water temperature, nevertheless, is not going to be just above four degrees.

Out of the rivers in Estonia suitable for water hikes, the River of Pärnu has the biggest drop. The difference in elevation between the starting and finishing point of the Türi–Tori 78 kilometres course is 50 meters with the average drop of 0.64 meters per kilometre.

When compared with the annual average discharge (65 cubic meters per second) the discharge during high water is up to seven times larger and the water level is up to four metres higher than that in summer. These figures describe perhaps best how much the conditions in spring differ from those in summer. Natural rapids and former dams that have crumbled to rapids are distributed relatively evenly along the entire course. Rapids that are visible also during high water are short and easy to pass which means that they do not demand any rapid turns or special skills. Most of the smaller rapids, on the other hand, are hidden under deep water and instead of shallow rocky rapids there is a strong current. And above all, there are neither rapids with such a demolishing power that might crush a boat against rocks and putting a life in danger nor actual dams with a strong backflow at the dam toe that pulls objects under water making it hard to get out. The dams at Jändja and Kurgja are the ones most paddlers prefer to carry their vessels around while more skilled competitors are looking forward to a little excitement passing straight through. Even when capsized, it is not difficult to make it to the riverbank as the river is relatively shallow even at high water and competitors are able to put their feet down and save themselves as well as their vessels.

In the first third of the route the river is relatively narrow and the riverbank is easily reachable, in the mid-section the river is at places nearly 50 meters wide and in the last fifth it becomes even a hundred meters wide.

According to the recreational water hiking classification the River of Pärnu as a whole belongs to the 1st category of difficulty (WW I, the easiest level), being feasible, even in high water, for everyone having passed the basic training and being able to steer a canoe or a kayak in the river.

Competitors

The skills and prior experiences of participants are quite different. There are paddlers experienced in white water canoeing who are able to cope and help others in every situation. There are experienced sea paddlers as well as paddlers who have seen much more serious rivers and rapids than Estonia has to offer. Then there are teams from the Estonian Defence League who have come for a power hike on a raft and teams comprising friends who have chosen the raft as the most stable vessel. And finally, there are paddlers whose experiences are limited to a canoe or kayak trip on a lazy river in summer.

Competitors wishing to develop high speed, choose the fastest vessel. But it is also a fact that the longer, slenderer and faster the vessel the more difficult it is to handle in fast river demanding technical skills and experience.

The spring River of Pärnu has little surprises for paddlers having experiences with fast flowing water, while

those used to the conditions on the sea or a lake may find themselves in a totally unfamiliar situation as certain manoeuvres result in a quite different outcome in the river than in the sea or a lake. Another issue is choosing the correct path, especially in rapids or in case of some serious waves, when lacking experience in spotting obstacles. And hence the possibility to capsize and find yourself in the cold water. A cold swim is guaranteed to paddlers in canoes as they are open on the top, while kayaks are more closed on top and most kayakers master techniques that allow them to get to the upright position if capsized. When choosing a path, it is also advisable to consider how to get to the bank on your own if capsized. On a narrow part of the river it should not be a problem while it might become one on the last dozen of kilometres where the river may be over a hundred meters wide. In case of a strong current the swimming distance becomes even longer and without a dry suit there is a serious threat of hypothermia or cold rigour. And that is where we come to the issue of equipment.

Equipment

I do not think I should dwell on the issue of using elementary safety equipment, such as life jackets. So let us start with the equipment protecting paddlers against the weather.

In warm weather, especially in summer, capsizing is not a problem as the water temperature is high enough for paddlers to reach the riverbank regardless the circumstances or clothing.

Early spring with its chilly waters, however, puts more serious demands on the clothing as staying in water longer may result in hypothermia.

Kayakers usually wear dry suits that together with suitable underwear protect them from the cold, making even the longer stay in water tolerable. But dry suits are expensive and somewhat uncomfortable to wear and while sea kayakers may use them all the year round, paddlers on rivers might do that only a few times a year. And as rafts and canoes are, as a rule, more stable and, therefore, safer than kayaks, canoeists and rafters prefer to do without dry suits and wear whatever is comfortable. Therefore, the spare set of dry clothes at hand becomes especially important as the time after capsizing is of essence.

As the paddling marathon is long, both in terms of distance as well as duration, it kind of necessitates a lot of things to be brought along. The majority, however, prefer to travel light to move faster and do not want to drag along the full set of equipment. That is where support teams and cars come in. The main task of a support team is to wait for the river team on bridges, control points or other easily accessible places by the river to check that their teams are doing all right and provide them with all the necessities during the day, such as dry clothes, food, drink, or spare paddles. In case of quitting, the support team is there to help with the vessel as is the case when carrying it around dams. Whatever the river team might need, the support team, be it one person or the entire family, will provide.

Another important issue is ensuring buoyancy of the vessel after it has filled with water. Most canoes and kayaks are buoyant thanks to the built-in air chambers but in case of some boats buoyancy must be guaranteed by other means. Buoyancy is important for salvaging purposes in cases where paddlers have abandoned the vessel after capsizing and it is drifting downstream by itself.

To sum up the abovementioned, the participants of the Türi-Tori Downriver Race have to:

- steer the boat in a rapid and strong current;
- pass through high-water rapids with strong current and waves where a steering mistake may result in capsizing and a risk of a current carrying paddlers downstream;
- carry their boats around the Jändja and Kurgja milldams (recommendable as it does not involve risks) or pass through the milldams (allowed), risking capsizing and falling into the water with strong current;
- paddle on a wide river where the river bank may be dozens of meters away and upon capsizing reaching the bank may be tiresome due to strong current;
- spend a long strenuous day in uncertain weather conditions (there may be snow, rain or hail combined with strong wind, or there may be a nice sunny weather) on the cold river that has just cast its icy cover.

That was the theoretical part but as practice is the sole criterion of truth I'd like to present stories of two participants on what may actually happen.

'Then came the time to get our stuff together: two sets of dry clothes (one set into the boat, the other into the car), a spare canoe (a rare practice - K.R.), a spare paddle, two sets of GPSs, some chocolate, water, 10 meters of rope, a headlamp, a knife and matches, just in case. In the morning, we had a discussion on what to wear. As it was quite cold and the forecast promised rain, and we had no intention whatsoever to capsize, I decided to wear a sweat suit and rain suit trousers and rubber boots instead of sneakers. A kilometre before the finishing line I became painfully aware of how wrong my choice had been.

In the rapids just before the finish, we ran on an underwater stone that simply knocked our canoe over. Until that point we had managed to keep ourselves dry. We tried to get our canoe on dry land but the accident had taken place right in the middle of the river (I still cannot comprehend how stupid we had been) and the current was too strong. By the time we realised we could not push the canoe ashore, it was too late for me. My teammate managed to get to the bank but I was carried downstream by the current. I desperately tried to get rid of my rubber boots but they had a thick lining that swells in water and I could not get them off. I then saw a stone in the middle of the river with waves going over it and I headed there. By the stone it was shallow enough I could stand up but I was rather weak already and once more the current carried me along. Several tens of meters

downstream I could get my feet down again and managed to keep myself up with the help of my paddle. I headed towards the river bank until my teammate could reach me with his paddle and managed to pull me to dry land. The following events are actually a big blur. We met a nice lady who sent us straight into the sauna they were heating. I called my wife who was our support team but she said the reception was so bad that she could not understand a word. The trouble was that my lower jaw trembled like a sewing machine needle. I gave the phone to the nice lady who then explained my wife what had happened and where we were.'

'We had the Trapper Corvus canoe. I wore a thin neoprene shirt, a 3 mm thick longjohn, Rafter shoes and a Hiko Kiara jacket – a rather typical outfit for me when on water. My teammate had a Hiko Rafter jacket and a Palm paddle jacket on top of it.

...that Corvus is a rather nervous thing when compared to our usual canoe... on the turn the wind started to push us crosswise with the river. And then and there, on perfectly calm water we managed to make a total cockup. As we tried to correct our course by turning to the right, I leaned far out to pull from the left. At the same moment, my teammate in the front decided to change hands to pull from the left too. I had only time to cry out before we capsized and then we were swimming in the river. In the middle of the river. In a wide section of the river.

The Corvus full of water has the buoyancy of an axe or an iron. Luckily, I managed to grab from the aftermost handle just in time to prevent it from sinking. My lifejacket had enough lifting capacity to keep my face above water while I was holding on to the canoe under the water. I called another canoe to help me while my teammate who was heading to the bank also turned around. For the men in the other canoe, the situation was also new but finally we got our feet down.

On the bank, it became cold. When we continued down the river, we warmed up again but, nevertheless, we decided to quit because so many teams had passed us during the rescue operation that we had lost our motivation to continue. That was the first time I had to take a dip during a long marathon or a hike.

What we learned from the event was that things turned from bad to worse because we had to rescue the equipment. We ourselves would have reached the bank in no time. If the other canoe had not come to help, I would have probably saved myself and let the canoe sink – I was that close to letting it go. And secondly, our clothes saved us. We were in the water for about ten minutes and yet we were able to continue our race.'

What could be done to make the Tūri-Tori Downriver Race safer for everyone?

There are two parties to consider – organisers and participants.

Organisers shall:

1. Give all the information they have on the conditions on the river as well as on what circumstances may occur during the marathon so that participants could consider their skill and abilities to cope on the marathon.
2. Make a statement letting people know that the event is only for those with enough experience and skills and advising rookie hotheads not to enter the competition.
3. Give specific advice on how to pass certain stretches of the river depending on the water level and weather conditions.
4. Chart all the rapids and dams and put rescue teams there. In previous years, we have had two sea rescue teams – one in the boat, the other on the bank – and they have moved according to a fixed timetable downstream together with competitors to assist if needed. In addition to professional rescue teams, there are organisers in certain places with throw lines standing by just in case. As the water level varies and the nature of rapids varies with it, the route is checked before the marathon and a safety plan is drawn up for that particular event.
5. Change rules in the last minute, if necessary. Right before one of the competitions a passage for fish was made downstream the Kurgja dam with a stone wall with only couple of passages across the river to guide the fish to the passage. On the day of the marathon, the stone wall was difficult to see due to the water level and waves posing a risk for vessels. Therefore, the organisers decided to keep the competitors from passing through the dam and had them carry their vessels around it. Later, this prohibition brought along a discussion among more experienced paddlers as they would have probably passed the stretch without a problem. But the organisers have to consider the weakest paddlers, the identification of which is almost impossible, and therefore the rules apply to everyone.

The paddlers should:

- ensure buoyancy of their vessels even when capsized;
- learn to "read" the river and choose a safe route;
- learn how to make use of the current and how to manoeuvre;
- learn how to spot obstacles in rapids and how to find a safe passage;
- choose a route so that they would be able to reach the bank on their own if capsized;
- **choose a vessel that corresponds to their skills as well as safe equipment by asking themselves "what if...?" And remember that people tend to underestimate the environment and overestimate their skills.**

The Tūri-Tori Downriver Race is an event where people come to test their skills and to get high on adrenaline. The biggest threat in this competition is neither the environment nor poor equipment as people have for

decades conquered the roughest rivers without contemporary clothing or gear. The biggest threats to themselves as well as others are hotheads with no skills and experiences wishing to feel the adrenaline run through their veins, while being incapable of coping with the situations they put themselves in.

Finally, a word of advice for those with less experience. If you doubt yourself and you are not sure whether you have the skills to clear a rapid safely, nobody will hold it against you. You can always get out and carry your boat around the rapid. Even the most experienced paddlers avoid risks when they wish to cross the finishing line in one piece and their clothes dry.

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