ITER: A Whistleblower Report

By Michel Claessens

A Preliminary Report to the European Commission, the European Parliament, the ITER Council, the European Anti-Fraud Office and the Défenseur des Droits (France)

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In Cadarache (France), the ITER Organization is silencing or firing its employees who speak openly and honestly of problems with the reactor and who veer from the official discourse.

Today, I report about some of these cases, based on facts, public information and discussions I have had with some of the ITER staff, including several heads of department. These are only the tip of the iceberg and reflect serious mismanagement problems within the ITER Organization, responsible for building the International Thermonuclear Experimental Reactor (ITER). The discussions and exchanges confirmed the concerns of the French nuclear regulator ASN and revealed serious worries about the protection of the environment, an area explicitly covered by the EU directive on whistleblower[1], and more broadly, the future of the project.

The ITER Organization coordinates the ITER project, an experimental reactor being assembled near Saint-Paul-lez-Durance, a small village in southern France. It is funded by 33 countries (China, the European Union, India, Japan, Korea, Russia and the United States). The Organization's management claims that by the end of this century, fusion energy, which fuels the sun and the stars, could become a new source of energy on Earth – "safe, clean and using abundant fuel."

It is never a pleasure to talk in negative terms of a project and an organisation that you have been proud of. However, I cannot, in good conscience, remain silent while I know that undisclosed issues are affecting this international project funded by public money (of which nearly half comes from the EU). Also, I would like to share with scientists and science communicators, particularly young people, the lessons I have learned from this experience[2].

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[1] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019L1937&from=EN

[2] Article 46 of the EU directive: Whistleblowers are, in particular, important sources for investigative journalists. Providing effective protection to whistleblowers from retaliation increases legal certainty for potential whistleblowers and thereby encourages whistleblowing also through the media. In this respect, protection of whistleblowers as journalistic sources is crucial for safeguarding the 'watchdog' role of investigative journalism in democratic societies.

You may find this story to be anecdotal at best and you might be right to think so.

I am telling this story now because the new European whistleblower law is now being implemented. Furthermore, I am recently retired and at last feel safe to speak out. I decided to make it public to support my one-thousand colleagues because I know that most of them remain, and will remain, silent for fear of reprisals.

This story is reminiscent of the inherent difficulties within the field of scientific research and science communication today. It shows in concrete terms how management, personal attacks, public affairs and institutional pressures may undermine a genuine science communication.

A scientist and journalist by background, I have spent most of my career in various fields of science and technology, mostly in international organisations. For more than twenty years, I put my dual scientific and journalistic skills at the service of Europe, in the European Commission's Directorate-General for Research. With my team, it was our ambition to highlight the benefits of transnational cooperation and bring citizens closer to a so-called "Europe of science." For me, the cherry on the cake was when, in 2007, the European Commission followed my suggestion and allowed coordinators of EU funded projects to devote part of the research budget to public communication activities. According to many scientists, these activities contributed to improve the visibility and credibility of European research.

Now freshly retired, I have a critical – but optimistic – look at my 30-year career as a science communicator and I review in particular the difficulties I had to face in communicating ITER. I have always been enthusiastic about popularising science. I love making scientific knowledge and technological advances available to the public. It is also an important activity for science and society at large as epistemologists today consider citizens as active players in scientific research – by the questions they ask, the ideas they propose and the interest or the concerns they express.

In January 2011, I succeeded in a recruitment competition organised by the ITER Organization and I immediately accepted the offer of appointment as head of communications and external relations. I was happy to bring my professional skills to the service of this flagship project and to nuclear fusion research.

I remember those exciting days. I was contributing in a tangible way to the fight against climate change because fusion is often presented as a zero-carbon source of energy. The early ITER management praised my objective to achieve open and transparent communication in order to provide the public with high quality popularised scientific information.

I was like a fish in water at ITER. A scientist speaking five languages, I welcomed hundreds of groups of visitors for scientific guided tours which blew most of them away: "Why are you not talking more on this breath-taking project?", they asked. I eventually published two books on ITER (Claessens, 2018 and Claessens, 2020) which have been praised by many scientists including Robert Aymar, who is considered as the father of ITER, and the former Undersecretary of State for Science in the Department of Energy, Raymond Orbach. The books received very positive reviews, including in the CERN Courier (Rossi, 2020).

MANAGEMENT DECISIONS. On March 28, 2015, after only 23 days as the newly appointed Director-General of the ITER Organization, the French Bernard Bigot, abruptly terminated my employment in the absence of any cause specified in my contract[3].

"We don't know each other but we are not going to work together," he told me on March 28, 2015. "However, this has nothing to do with your competences," he added.

I anticipated the possibility of this kind of decision. When a top manager comes in, he or she may want to bring in his or her own staff and change the management style or priorities. I remember I told my colleagues, as early as January 2015, that the new director (who was still unknown at that time) may decide to replace me.

But this type of abrupt decision is sometimes not linked to the management. It may be triggered because of a conflict of style, for example if the new director and the head of communications disagree on the strategy to be implemented and the way the project will be presented to the public and the media. It may also happen if public affairs and lobbying become more important than science communication. It can also be linked to personal issues or disagreements between the people. Last but not least, this decision may be motivated by political reasons.

When my employment at ITER terminated, the European Commission reassigned me to "Fusion for Energy" the European ITER domestic agency based in Barcelona which manages the EU participation in ITER. However, its managers ignored me. They didn't reply to my emails and phone calls. In August 2016, the Director-General of the Energy Department of the Commission changed his mind and reassigned me back to Brussels as "ITER policy officer". However, it felt like I was put in a fridge. After a busy twenty-year career, I was forced to spend my days waiting for an email arrive.

While I was still trying to do my job for the Commission, the ITER management in Cadarache pressured me directly and indirectly in efforts to limit my freedom of speech. On at least three occasions, they contacted me and criticized me for speaking with journalists about my prior experience as the ITER spokesperson and about the articles and the books I was writing about ITER. They tried to convince me to stop talking with journalists. When I failed to comply with their demand, I was called to appear before my supervisors in the Commission. In mid-2017, my health started to decline.

CONFLICTS. I was no longer "his master's voice": in my books (of which the publication had been accepted by the European Commission), I address issues about ITER in an open, constructive – but somewhat critical – way, such as the total cost of the experiment, the supply of fuels and the economic feasibility of fusion energy. As a result, the ITER Organization's staff members are still today instructed to not mention any of my books and articles. I know this because a

[3] None of the four causes for contract termination mentioned in article 6.3. of the ITER Organization's staff regulations applied in my case:
- […] suppression of the budget post […]
- […] change in the nature or functions pertaining to the post
- […] professional inadequacy of the staff member […]
- […] medical unfitness of the staff member […].

communication officer recently confirmed this to French journalist Celia Izoard during her visit at the site.

In July 2021, a Brussels-based company invited me to organise two panel sessions on ITER and fusion during the 76th General Assembly of the United Nations which took place in New York from 14 to 30 September 2021. However, the manager had to cancel the sessions because the ITER Organization told them that "they will not participate in any meeting or activity that I have anything to do with" (Krivit, 2021).

It became clear to me: the manner in which I wanted to personally speak about ITER conflicted with the manner in which the organisation, wanted me — a former employee — to speak about ITER. Whereas the current management prefers to make exaggerated claims such as "ITER scientists predict that fusion plants could start to come on line as soon as 2040 (ITER Organization, 2017)," I prefer to stick to the scientific facts.

I have been punished and I am still being punished: in June 2021, the ITER Organization refused the request of the former EU Commissioner in charge of research and innovation, Philippe Busquin, that I accompany him to visit the ITER site. And two weeks ago, they refused to grant me access to the site to accompany a group of students and teachers from an engineering school in Brussels (I had organised the group to visit CERN, CEA and ITER on 4-5 November 2021).

The key here is that ITER is most definitely a political project. It was launched by Ronald Reagan and Mikhail Gorbachev in 1985 and ever since, the project has been managed by politicians, who sit on the ITER Council, the project's top-level governing board, composed of representatives of the governments of each ITER member, and by scientists at the political level in the ITER Organization. ITER can be considered as a "political technology," defined by Robert Bell (1998) as a technology developed and showcased for political reasons.

DIFFERENT COMMUNICATION STRATEGIES. In hindsight, my approach to ITER was naive. I have always argued that communication about ITER must be open and honest, simply because ITER is funded by public money. This was my first 'mistake'. Despite repeated requests to the ITER Organization from the European Commission, myself and other people to be more honest and accurate, the management has not taken substantive action to demonstrate this. The ITER Agreement, the project's legal basis, states (article 3.1c) that "The ITER Organization shall […] promote public understanding and acceptance of fusion energy." The current management is certainly interested in promoting public acceptance of the ITER project (which is directly tied to acceptance of its public funding) but its actions demonstrate that it is less interested in promoting accurate public understanding of the project.

For example, the ITER website home page claims boldly: "UNLIMITED ENERGY." This is obviously false – nothing on Earth is unlimited. Furthermore, the worldwide inventory of tritium, one of the fuels of the fusion reaction, is very scarce (around 30 kilos). According to the website, the ITER budget is still estimated at 22 billion euros (the real cost is at least twice as high). And for many years, the ITER Organization has been claiming that the overall ITER reactor will produce ten times the power consumed by the reactor (i.e., an output power of 500 megawatts (MW) from only 50 MW of input heating power). In reality, the net power generated by the overall reactor will probably be close to zero, as reported by journalist Steven B. Krivit

(2017). Incidentally, the ITER Organization sent this year an email to all the staff and contractors instructing them NOT to talk to Krivit.

Despite repeated requests since 2017 to communicate the project accurately and transparently, and even though the ITER management has demonstrated some compliance with those requests (mainly through *Newsline*, the newsletter which is a masterpiece of popularisation), the organisation published a press release on July 28, 2020, with an unequivocally false and exaggerated claim. It claimed that "The plant at ITER will produce about 500 megawatts of thermal power. If operated continuously and connected to the electric grid, that would translate to about 200 MW of electric power, enough for about 200,000 homes."

This claim is false because it omits the 300 MW of electric power needed to operate ITER and produce the 500 MW[4]. The organisation has since quietly removed the press release from its website (the original is still available on the Max Planck Institute's website[5]).

It is only in the very recent article published on October 27, 2021 by the famous French newspaper "Le Canard Enchaîné" that the ITER Organization admitted for the first time that "Obviously, all the systems of the ITER plant will consume more energy than what the plasma is going to produce." However, at a hearing in the French Parliament (Senate) which by coincidence took place on the same day, the Director-General surprisingly said that "If God allows me to be alive, in 2035, I will see effectively 10 times more energy produced that ITER will effectively have consumed[6]". A few minutes later, the Director-General said that "at the end of the day, the efficiency will be between three and five, 3 and 5."

WHY PERSONAL? My second mistake is that I underestimated the political nature of the project. The previous examples show how the ITER top management behaves outside the norms of science ethics. Such grossly false claims reflect the underlying necessity of the current management to control any external communication about the project by whatever means is necessary.

From my conversations with former colleagues, I have learned of dozens of potentially unlawful terminations, some of which have already been determined and penalised by the Administrative Tribunal of the International Labour Organization (ILO) in Geneva[7]. They have also told me about illegally modified contracts (job description, grade etc), waves of staff resignations, mis- and disinformation (e.g. on power values), data manipulations (for example to reduce the apparent delays) and a workload unequally spread over the one-thousand staff (of which two died from a heart attack in the last six months). An American director and the head of personnel were both fired in just one day, much like we see in some Hollywood films, and were accompanied by security guards to their car without having the time to properly hand-over their open files. The latter won her case in 2018 before the Administrative Tribunal of the ILO.

[4] 20200729Krivit-to-Coblentz.pdf (newenergytimes.com
[5] https://www.ipp.mpg.de/4891427/ITER-PR-July-22-2020.pdf
[6] https://twitter.com/i/broadcasts/1mnGedMaoqYKX
[7] See for example the judgement of June 26, 2018:
https://www.ilo.org/dyn/triblex/triblexmain.fullText?p_lang=fr&p_judgment_no=3990&p_language_code=EN

In May 2021, one of my colleagues in the ITER European domestic agency in Barcelona committed suicide for professional reasons, according to a report of a European Commission's trade union (Vlandas, 2021). And a suicide attempt happened at ITER on October 12, 2021, also for professional reasons (a Korean, father of three, who was under too much stress). "It could have been you," my wife concluded.

More recently, a senior manager and renowned nuclear expert, who wishes to remain anonymous for fear of reprisals, discovered that she had been fired only by reading the monthly list of departing colleagues and seeing her name there. But the termination occurred a few days after publication of a French news story in which she had been assigned to answer questions. The journalist unexpectedly learned that this nuclear expert had been misinformed about the planned ITER power values and this was revealed in the news report. The expert also spoke honestly about safety concerns regarding some of the materials[8].

Nothing new under the ITER sun: we know that in both the private and public sectors of this business, competence can be penalised. Same story, different person: the ITER management has terminated employees who have spoken honestly and accurately about the project when that truth conflicts with the public relations strategy of the organisation.

According to my former colleagues I spoke with, the Director-General established within the organisation an unofficial team that reports directly to him, circumventing the managerial structure in place. They said he has empowered this team to oversee the organisation, thus enabling him to exert his personal control when rank-and-file management disagrees with him. They said that not only does this devalue the contributions of staff members, it creates a climate of insecurity and fear among them. They now fear that the project's mismanagement may create technical problems in the assembling and in the operation of the reactor.

The discussions I had with my former colleagues revealed that recent decisions taken by the ITER Organization may compromise in particular the protection of the environment, the obligations required by the article 14 of the ITER Agreement, and even the future of the project. The Autorité de Sûreté Nucléaire (ASN), the French nuclear regulator, reported on July 2, 2021 about falsified qualification certificates of welders and pointed unacceptable delays in supplying the ASN inspectors with the relevant information[9]. The regulator recently urged the ITER Organization to provide more information about the volume and the storage of tritium waste[10], highlighting important delays in designing the storage capacity of tritium waste, the so-called 'Intermed' Basic Nuclear Installation. There are other serious issues, such as the welding of the two vacuum chamber sectors (that arrived damaged on the site). Despite the fact that these two sectors cannot be welded together as they should be, the ITER Organization initially planned to install the two sectors in the tokamak pit (so as not to miss the milestone) although the repair there will be very difficult if not impossible. However, on 25 January 2022, ASN decided to put the assembly of the reactor on hold, as explained in a letter sent to the Director-General of the ITER Organization: "For the time being, I urge you not to take any action […] concerning the sectors of the vacuum chamber affected by dimensional non-conformities.

[8] My former colleague asked me not to publish the reference of the interview so that she can remain anonymous.
[9] https://www.asn.fr/recherche?filter_year[from]=2021&filter_year[to]=2021&search_content_type=letter&search_content_subtype=letter_inb&nuclear_installation_name[]=Iter&search_text=INSSN-MRS-2021-0650
[10] Avis no 2021-AV-0379 de l'Autorité de sûreté nucléaire du 11 mai 2021, https://www.actu-environnement.com/media/pdf/news-37664-avis-asn-dechets-sans-filiere.pdf

[…] An in-depth design review seems to have to be carried out before you request again the authorization to assembly tokamak's components inside the cryostat." And also: "The elements transmitted do not make it possible to demonstrate control of the limitation of exposure to ionizing radiation, a major issue for a nuclear fusion installation and […] for the workers around the nuclear buildings."

Recently, the ITER Organization decided to cancel the installation of all fire protection systems in the nuclear buildings (except in a few rooms) to push the schedule, without informing ASN.

Another radioprotection issue concerns the walls of the nuclear buildings and in particular the 'bioshield' three-metre thick concrete wall that surrounds the tokamak to protect workers and the environment. Because of errors in the design and construction of the walls, the effective biological protection will be 30% lower than expected. ASN asked to implement additional protection modules but the ITER Organization refused to follow-up. The alternative solution proposed is not public. On December 10, 2021, ASN will issue its decision which most likely will reject the approach followed by ITER Organization.

Unsurprisingly, the project delays are already huge—the first experiments were initially scheduled to begin in 2016, now officially in 2025, and most probably in 2031. At its next meeting in November 2021, the ITER Council may only announce a 1-year additional delay (first plasma in 2026 instead of 2025) so as not to create a crisis. The total construction cost of ITER is now estimated at around 41 billion euros which means that the budget overruns amount to nearly 36 billion euros – which of course is passed along to the ITER members' citizens.

All these practices are unacceptable in a project funded by public money. The only explanation I found is that ITER is based on a political assumption—that fusion will soon become a commercial, safe and clean source of unlimited energy. In France and other countries, where nuclear energy is a highly sensitive and strategic issue, ITER is part of the national strategy and political leaders hope that fusion will reconcile their populations' hesitancy about nuclear energy. Therefore, the end justifies the means and some people consider opposing a project like ITER as uncivil or unpatriotic. Indeed, dissent is nearly non-existent. For their roles in the project, the ITER Council members are reluctant to send negative messages to their respective governments. The ITER staff and contractors fear that they may lose their jobs (the ITER Organization's employees are not eligible for French unemployment benefits).

THREE MESSAGES. I would like to leave readers, particularly young people, with these three thoughts.

Firstly, in some organisations, science communication is never far from public relations, marketing and even lobbying. Managers use the science communication tools to pass on political messages and justify management decisions. However, as I argued in a previous article, research institutions have the responsibility to contribute to the development of a genuine science communication culture (Claessens, 2014).

Secondly, a head-in-the-sand strategy is never a good idea. When my contract was terminated, I should have immediately taken legal action against the ITER Organization instead of hoping for a fair solution to somehow develop. Science and technology are today highly competitive fields, and they are moving increasingly closer to politics. This situation encourages managers

to act in ways that do not match their professional records or the integrity we expect from people in the scientific world. Therefore, vigilance is key. Better oversight by the public and the press is needed.

This is why today I want to let people know about this story even though I fear the ITER Organization may use its virtually unlimited political power and funding to take personal action against me to suppress my dissent. Thomas Jefferson said that "dissent is the highest form of patriotism." It is my hope that wisdom in accordance with the higher values of the ITER members and the European Union will prevail. It is my hope that members of the public and representatives of the ITER parties will appreciate my efforts to redirect the activity of the ITER project in a manner which better dignifies the support and funding given to it by the public and the participating governments.

Thirdly, I am not sure whether fusion energy will one day contribute to fighting climate change but I am still convinced that ITER is a worthwhile project. Despite obvious management issues, 33 countries working collaboratively and building an experimental fusion reactor sends a strong message of hope and optimism to the world. Can we accomplish this feat without compromising our humanity and dignity?

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15 February 2022 Update

1. About the bioshield issue

On 8 December, 2021, IRSN (Institute of Radioprotection and Nuclear Safety) sent to ASN its report[11], which rejected the approach proposed by the ITER Organization: "As far as protection against ionising radiations is concerned, […], IRSN considers that the current development of the solutions [proposed by the ITER Organization] does not allow, at this stage, to conclude on their technical feasibility, on their efficacity or on the impact on safety of these [proposed] solutions."

Specifically, IRSN considers that the possible exposure of the public and workers to radiation is underestimated by the ITER Organization. During a special meeting of the steering committee ASN/IRSN/ITER Organization on January 5, 2022, ASN announced that the reactor assembly is not authorized, which means in practice a shutdown of the project. More precisely, lowering the two vacuum vessel sectors in the tokamak pit is not allowed.

[March 22 update: This has been confirmed in a letter sent on January 25, 2022 which instructed the Director-General of the ITER Organization to halt the assembly of the reactor.]

2. A very serious accusation

On December 1, 2021, I received from an internal source at ITER an exchange of emails between an ex-colleague and an employee of the Organization, the first one writing to the second one and making a very serious accusation:

"Here is the explosive document [my whistleblower report, author's note] written by the former communication director at ITER. His report incisively denounces hard management practices, concerning both human resources and scientific choices, which may, if they are confirmed, endanger the project. Enjoy the reading and please delete this email as soon as you have read it. Thank you:

- Technical problems are mentioned, such as the vacuum sectors that cannot be welded together as they should be because lifted down in the tokamak pit in a complete sector (with thermal shields and two toroidal coils) to be on schedule (?)
- Personnel management
- The waves of many terminations, including myself (with two more colleagues we have been fired because we refused to install components without testing them although they present a life-threatening risk for the maintenance workers
- The problems with ASN
- The fake documents about quality insurance
- etc."

[11] https://www.irsn.fr/FR/expertise/avis/2021/Documents/decembre/Avis-IRSN-2021-00195.pdf

Unfortunately, we are fighting since long time to correct these anomalies…but the order was "we will see later… we move forward." Fusion is apparently no longer the priority.!....????? It is sad."

3. Iodine-131

Finally, there is an issue with the release of some products, specifically iodine-131, a radioactive isotope present in nuclear fission products, and a significant contributor to the health hazards from open-air atomic bomb testing in the 1950s, and from the Chernobyl and Fukushima disasters. In 2019, an internal working group of the ITER Organization concluded that iodine-131 will be released in the tokamak (because of traces of uranium-235 in the beryllium covering the walls). According to their technical simulations, a worst-case accident at ITER could release at least to 10 times more iodine-131 than a PWR (pressurised water reactor) fission plant. It may be that the working group's conclusions are false as the experts assumed that iodine-131 diffuses at the same speed as radon. But if confirmed, this could put at risk the future of the ITER project (ASN will most likely decide to relaunch the licensing process). A group of independent experts should urgently be set up to clarify this issue.

4. Beryllium and ITER mismanagement

Two scientists, known to be among the best world experts on beryllium, recently resigned from the ITER Organization because of profound disagreement with the intentions of the ITER management about protecting workers from biohazards of beryllium. They concluded of "intended neglect" to worker safety as the management does not intend to perform the necessary steps to protect the lives and safety of its workers.

Beryllium, a light metal, is known to be highly toxic to humans, because beryllium dust can damage the lungs and cause beryllium sensitization and Chronic Beryllium Disease (CBD), a dangerous and persistent lung disorder that has no cure.

In ITER, beryllium will be used to cover the 440 blanket modules (also called bricks), which will compose the inner first wall of the tokamak. In total, the reactor will contain about 12 tonnes of beryllium, covering a surface of 610 m^2.

According the two experts, the ITER Organization has not yet implemented the beryllium safety plan (BMCP, Beryllium Management and Control Program). The current protocol for manufacturing, handling and installing the blanket modules could lead to "unacceptable contamination among the workers," the experts said. An ITER Organization's document mentions 450 beryllium workers at ITER over the project lifetime but the experts claim that this number is deliberately underestimated.

Scientific evidence shows that CBD may occur at exposures which are well below the exposure limit (0.2 $\mu g/m^3$). At ITER, the risk may affect one worker in five. As a result, occupational beryllium risks for ITER should be considered equal if not higher than occupational risks to radionuclides for levels at their exposure limits. The document concludes that "There is a potential for more than one hundred [CBD] cases if beryllium risks are not effectively controlled." It includes eight recommendations, such as "using tungsten for the second set of the first wall panels after 15,000 pulses" and hiring "beryllium experts and place the manager

[in charge of the BMCP] in a position of authority in order to accurately evaluate risks and direct the design of controls."

One of the two scientists was asked to make a presentation on beryllium risks to the ITER management. Her superior disagreed with the draft presentation and wanted to make the presentation himself. The scientist and her colleague resigned shortly afterwards, taking stock that the ITER Organization is underestimating the beryllium risks.

About the management of ITER, one of the two experts explained to me: "There are layers of bad management practices at ITER. […] I was really surprised to learn that they don't have training on sexual harassment or gender bias. My manager was noted for saying things like "women don't really belong on a construction site", "let's look at Sarah's curves" for an introduction to a female engineer giving a talk using charts, and calling us "safety girls". There is one manager named E., who makes sexual jokes in French all the time to the French female colleagues. One female engineer refused to work for him. Now her contract is not going to be renewed even though her work was exemplary."

"I have seen practices of intentional distraction, insertion of managers to manage something they have no experience with, rewarding fusion physicists with division management positions without the proper experience, setting major unrealistic cost limitations to very important building designs, establishing another policy without the use of the technical experts to avoid following the current one that applies and the list goes on. A normal person just gets worn down by the drama!"

22 March 2022 Update

5. "A lot of people seriously affected by the issues you have raised"

On 2 March 2022, a mechanical engineer working at the ITER Organization wrote to me on LinkedIn: "Dear Michel, I want to thank you for your testimony - there are a lot of people seriously affected by the issues you have raised. What you are doing will hopefully force the organisation to admit and deal with these problems, so the project can move forward. Thanks once again."

6. "ITER rewards submission and incompetence"

"I resigned after a few years as an employee of the ITER Organization because of nepotism, incompetence of my manager and practices employed to try to hide this incompetence", says a former executive of the ITER Organization. "This Organization is ruled by fear and it rewards submission to the Director General who has consequently surrounded himself over the years with courtiers rather than competent professionals. This configuration is spreading at all levels. It is indeed very risky to bring the slightest contradiction, even founded. My experience at ITER has also been marked by the departure of excellent colleagues - conscientious professionals - who held key positions. They carried out uncompromising work and thereby brought to light certain serious shortcomings in terms of the safety of the installations. They eventually quit to stay true to their values. »

7. Unfair administrative decisions

Since the change of management in 2015, ITER staff at large have been subjected to increasing stress, linked to the work and challenges of the project, but also to unfair administrative decisions. This started in March 2015 when one of the first decisions of the new Director-General was to want to reduce the family allowances granted to staff with children. He had to backtrack, faced with almost general discontent. Subsequently, he changed the amounts reimbursed for mission expenses, revised downwards.
Recently, another questionable decision was the change in the site access rules in July 2021, due to the Covid-19 pandemic and which, to date [mid-March 2022] is still in force: "I have decided in my responsibility as IO DG, to ensure access to the ITER site in the future - in compliance with the IO sanitary regulations – to those collaborators who become contaminated with Covid-19 provided they present to HSE and to their line management the evidence of their commitment to be vaccinated as soon as possible in case they are not yet and to commit strictly to respect all the precautionary sanitary measures in place, including in their private life as long as the virus is largely circulating."
Therefore, when an unvaccinated employee catches Covid, their badge is immediately suspended. This decision by the DG deprives all those who have not been vaccinated from returning to work on the ITER site if they do not commit in writing to being vaccinated as soon as possible and to scrupulously respecting barrier gestures, including in private life.
This rule is completely unfair, stressful and stigmatizing. ITER staff do not work in a hospital and do not have to face this kind of pressure. In France, apart from a few well-defined professions, an employer cannot require but only encourage his employees to be vaccinated. He does not have the right to ask an employee to prove that he is vaccinated in order to be able to come to

work. In addition, in mid-March 2022, health rules are being relaxed or even disappearing in Europe.
The problem comes from the international status of the ITER Organization, which allowed it to define its own contracts and access rules. However, CERN, a comparable international scientific organization, has not adopted the same rule.
On 8 December 2021, an internal procedure was updated and approved by the ITER Organization on information protection levels. It states in particular that "The IO Director General (DG) and/or his delegate has full authority to modify any protection level of information at any time without the prior consent of its author/ originator when the DG and/or his delegate determines that such action is deemed in the best interest of the Project and/ or Organization." This means an increased power of the Director General to control the staff.

8. ITER's management and corruption

"A lot of the information presented in the report is new to me (e.g. the beryllium safety concern, the forging of welding certificates/reports, the sexist management) but the rest is pretty much what my relative has consistently told me is happening at ITER: incompetent people holding job positions (i.e. management), severe lack of concern for meeting safety guidelines, fear of speaking out due to repercussions like being fired almost on-the-spot (unlike in some countries, ITER doesn't offer unemployment pay when you're fired), sudden changes in job contract details, the list goes on. […] I personally have a relative who has been working at ITER for more than a year now, and I can confirm that many of the points in the report are unfortunately the reality. This is just the tip of the messy iceberg that is ITER's management and, dare I say, corruption." (posted on Reddit, 9 March 2022, https://www.reddit.com/r/fusion/comments/t9qxqb/former_iter_director_of_communications_denounces/
)

9. Suicide and incompetence

I met on March 11, 2022 in Manosque an engineer who expects to be dismissed in the coming weeks. In his fifties, he worked in large French and foreign companies. He now expects to lose everything. "There was a suicide at ITER on February 19, an executive working for one of the contractors on the site. He had personal problems but, feeling let down by the company that employed him, had asked to speak to the ethics committee of the parent company. I myself had a work accident on a non-compliant installation which was however accepted by ITER. My company and the ITER Organization had authorized work on it when it was illegal. After the accident, I was declared unfit to work on the site. I expect to receive a termination letter. If so, I will go to court. In almost thirty years of career, I have never seen this. The management of the ITER Organization has no experience of industrial and nuclear projects. They do not think in terms of safety and, while people with nuclear experience should advise all departments, these aspects are very largely neglected. ITER is a beautiful image but the environment is toxic. I am almost certain that quality control documents have been tampered with. Emphasis is placed on form over substance. The ITER Organization exerts mad pressure on contractors and sometimes directly on their personnel, which is prohibited. And some companies like to offer more than what is requested. But for some contracts, the incompetence is shared, especially if the company involved has moved away from its core business. »

10. “A disastrous management of human resources”

“I saw your interview in front of the European Commission and I am happy to hear you in a way break the omerta around this project. I have never been employed by the ITER Organization but have applied several times. I spent 5 years as a contractor at ITER in IT between 2016 and 2021, I arrived there on my own full of enthusiasm and ambition. I was proud to work for this project. And then quickly the reality of this project-fiasco took over. Admittedly, I was disappointed to not becoming an employee, but that's not what gave me this feeling.
In my current professional life, I'm having fun like never before, but your interview makes me want to talk. Already when I decided to leave the project, I wanted to write a letter to Dr Bigot. I don't know where it comes from but I have the deep feeling of having left a sect in which things don't turn out normally.
There is a total opacity in the recruitment process, as well as in calls for tenders (I had answered it with my company), under cover of international organization. Many employees who are there for more than 10 years kind of own a territory for historical reasons rather than for their skills. But there many more issues, such as: huge inertia, calamitous management of external staff, personality cults and unacceptable arrangements, disastrous management of human resources, employees living in a golden prison and external staff working below the market price (except for some people recruited long time ago), 'mafia' companies (such as the company that employed me, which was placed in compulsory liquidation just before the Covid and I was not paid for 2 months at the worst time)... In short, I do not want to give the impression of spitting my venom (this is not at all my goal), but thinking about it coldly and with one year of hindsight, I find it very serious what I lived there. Beyond that and to end on a positive note I also met some great people but they all left 😊. »

11. Fake evaluations of the ITER Organization?

Someone sent me a link to the Glassdoor reviews of the ITER Organization[12]. Glassdoor is an American company which provides a website where current and former employees anonymously review companies.

Looking at the reviews of ITER on 20 March 2022, I am surprised to see that some of them look very similar, as if they were posted by the same person. Just 2 examples:
4,0 ★★★★ 18 sept. 2021. Pros: “An international exposure with an ongoing project in its construction phase, so a lot to learn”. Cons: “Remote location and limited transportation”.
5,0 ★★★★★ 7 sept. 2021. Pros : « International exposure, learn from scratch, wonderful experience. Cons : « Remote location, personal transport nearly mandatory ».
I shared my concerns with Glassdoor and got a reply on 24 March 2022, saying that they removed the two reviews. In their community guidelines, Glassdoor state that “We remove content if we have evidence that users were incentivized to or coerced into leaving the content.” They also claim to “use proprietary technology filters & algorithms to detect attempted abuse and gaming”. I am sure at least 15 other fake reviews have been posted on the web site in the last two years.

[12] https://www.glassdoor.co.uk/Reviews/iter-reviews-SRCH_KE0,4.htm