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The difficult management of the North Korean nuclear threat

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The beginning of 2016 saw a serious deterioration of the relations between North Korea and the International Community. The latest nuclear test, which occurred on January 6, and the following long-range missile launch draw the attention of the International Community to Pyongyang's research program for the development of atomic weapons.

The government of North Korea has always considered achieving a nuclear capability for military purposes a strategic priority for the Country, as the atomic weapon has always been seen as a fundamental instrument of deterrence in a context of highly problematic relations with neighbouring countries. Since 1993, when Pyongyang withdrew from the Non-Proliferation Treaty (NPT), North Korea has allocated almost 700 million \$ per year for its nuclear research program¹. This investment has always been addressed to the simultaneous development of technology for manufacturing both nuclear weapons and launch vehicles, in particular mid and long range ballistic missiles. The core of the research program is the scientific centre of Yongbyon, in the province of North Pyongyang, 90 kilometres from the Capital. Built at the end of the 1960's with the assistance of the Soviet government, the

site has been restored many times over the years, according to the regime's willingness to comply or not to international pressures and requests regarding local research activities. Although information are rather sparse, according to the latest satellite images the site should currently include:

A 5MWe (electric megawatt) reactor, powered by natural uranium, for the production of weapon-grade plutonium. After being shut down in 2007, during International negotiations with the Community, the reactor has been reactivated in 2013. It looks like that the subsidiary cooling system has been recently connected to the pumps of a light-water reactor, in order to speed up its complete restoration.

• A radiochemical laboratory, for the purposes of reprocessing² nuclear exhausted fuel (which is used in plutonium-based reactors).

• A facility for Uranium-enrichment, where - apparently - a plant for the separation of uranium-isotopes is currently under construction. Essential for nuclear proliferation, according to estimates from 2010 the site should include 2.000 P-2 centrifuges, collected in six cascades, based on the design provided by Pakistani scientist Abdul Qadeer Khan. However, it seems that since 2014 the original plant has

¹ According to South Korean sources, in 2016 North Korea would allocate almost the 15,8% of the national budget to Defense sector, that includes also the expenditure for the nuclear program. Kora Development Bank evaluated that the total amount of national budget should be almost 7,7 billion dollars, of which 1,2 billion should be destined to military expenditure.

² Reprocessing is the chemical process of separating exhausted fissile fuel into its basic components, for the recovered plutonium to be used as fissile material.



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been enlarged, as new centrifuges, whose number and types are still unclear, have been installed.

• A 25-30 MWe experimental lightwater reactor (LWR), still under construction³. Although originally slated to produce electricity, the facility should include a structure for the production of enricheduranium, which could be easily converted to the enrichment of military-grade fuel.

Because of the idea of using nuclear technology as an instrument of deterrence and, as a consequence, of power assertion towards the International Community, North Korean never denied its progress in experimenting plausible military applications for its nuclear technology. Thus, the establishment has always publicly announced the successful conclusion of several experiments, such as the four nuclear tests at the site of Punggye-ri in 2006, 2009, 2013 and 2016. This allowed the Government to leverage the relative media coverage, both to reinforce to the eyes of its own public opinion the myth of the Regime and to launch a signal of strength to the International Community.

This trend has reached its peak during the last five years, with Kim Jong-un's arrival at the top of the Regime. With the elaboration of the so-called byungjin policy in May 2011, the new Supreme Leader has considered economic development and nuclear

deterrence as the two cornerstones of his strategy to strengthen the State. It does not appear as a coincidence, in fact, that over the last five years, as Pyongyang increased its efforts in acquiring an atomic arsenal, the Country has made some great steps forward in its research programme. The importance of the media for the Regime has been particularly evident after the last trial, when the regime claimed to have tested a hydrogen bomb⁴, whose explosive potential is far higher than a traditional atomic device. Although international experts, after studying the earthquake induced by the test, dismissed the possibility that Pyongyang actually had the technology necessary for an H bomb, the statement made by North Korean authorities seems in line with the Regime's strategy of launching a precise political message, both inside and outside the Country.

³ The water.light reactor is fueled with enriched uranium to 3,5%

⁴ An hydrogen bomb is ten thousands time more powerful than an atomic bomb: a first fission trigger the nuclear fusion.





Figure 1 - Nuclear tests conducted by North Korea in the last ten year (Source BBC).

In the first place, the clamour raised by the media and the idea of regional stability being threatened by the test looked like a show of strength by Kim Jong-un against the State's high hierarchies. Although Kim's family is at the centre of a real cult of personality, a fundamental principle for the stability of the North Korean system, the current supreme leader seems to be less "popular" within the state apparatus compared to both his grandfather and father. Risen to power after the sudden death of Kim Jong-il, Kim Jongun lived most of his adolescence abroad and returned to North Korea just one year before taking control of the State, more or less at the age of 28. I was inevitable for young Kim to be not only substantially unprepared to run the State, but also and foremost totally stranger to the powerful élite which previously managed the "bureaucratic

machine", both within the military ranks and the economic establishment.

In this context, the his sensationalist and sometime sclerotic attitude looks like an attempt of having its role recognized, as the uncontested and indisputable guide of the State, as well as preventing the rise of any revolutionary fringe within the Regime. The most resounding instrument of this strategy is represented by the systematic elimination of his opponents, even within the top offices of the State and the Party (Korean Worker Party - KWP). Between 2014 and 2016 a total of 68 members of the regime may have been executed; among them there was Jang Song Thaek, uncle and, after Kim Jong-il's death, de facto tutor of the young leader, as well as trait d'union between North Korea and China. Thaek probably paid



for his attempt at building a group, within the Party Central Committee⁵, aimed at counterbalancing his nephew's excessive power, in order for the Country to have a more rational direction, such as achieving economic reforms inspired by China and downsizing the nuclear and ballistic program in order to ease tensions with neighbouring countries.

At a time when the economic pillar of the byungjin is not bringing the hoped results, Kim Jong-un has to feed the propaganda of atomic proliferation in order not to lose credibility and to reinforce the myth of the Leader's infallibility in the eyes of the apparatus. This trend finds confirmation in the government's choice, despite the strong international condemnations towards the last nuclear test, of raising the tone of the confrontation by announcing both that the regime has successfully miniaturized an atomic charge and that it intends to make pre-emptive nuclear attacks against possible aggressions from abroad. Even though there are currently no evidences that Pyongyang effectively miniaturized has a nuclear warhead, which would be an essential part of the process of building a portable atomic device, the increasingly aggressive rhetoric of the Country is exacerbating the tensions in the area.

Over the last months, in fact, the attitude of Kim Jong-un has prompted the strong reaction of the International Community, looking which is at the regime's unpredictability pf the as one most dangerous threats for global security. More than the sudden announcement of an imminent attack against its neighbours, international concern has been raised by Pyongyang's reiterate efforts at fine-tuning mid and long range ballistic missiles, which, being perfect carriers of atomic warheads, would represent a real step forward the finalization of a nuclear arsenal. It is not a coincidence, in fact, that the day after the intercontinental missile test, held on 7th February, the United Nation Security Council (UNSC) adopted a new resolution to reinforce the sanctions currently imposed against the regime. According to the UNSC's decision, in fact, the sanctions envisaged by resolution 2270 include an obligation to inspect all the naval and aerial cargo entering and leaving the country; they reinforce the embargo against the purchase of any Defence system, even light weapons, and of fuel, as well as any device which could contribute to the improvement of the capabilities of North Korean Armed Forces; they forbid the sale of any luxury goods and the export of coal, iron, gold, titanium, vanadium and precious minerals; they impose the interruption of any relation with the bank system of North Korea and the closure of all north Korean banks in foreign countries.

⁵ The Committee is the policymaking body. It has the power to approve political and ideological campaigns and deliberates and advises on government policies. The Central Committee is elected at a Party Congress



This crackdown is aimed at preventing the regime from bypassing sanctions, as it happened already in the past, and it's just the most evident and general symptom of the International Community's exasperation towards Pyongyang. The ongoing provocations and the government's resolve in carrying on its nuclear proliferation programme have made the containment of the North Korean threat a priority for countries such as China, South Korea, Japan and the US, since they view the stability of the whole area as a matter of national interest. In light of this, all the concerned governments have put aside, although temporarily, the historical issues that have always strained their relations and they have opened a dialogue to find a common position from where to force Pyongyang to renounce their nuclear ambitions. Since the outburst of the crisis the strongest proponents of a coercive action against North Korea have been South Korea, as the main target of the regime's provocations, and the United States, as they view the unpredictable behaviour of Kim Jong-un as one of the main threats to their strategic interests.

Seoul, from its part, has closed the industrial district of Kaesong, the facility jointly run by the two countries and located in the demilitarized zone, along the 38th parallel. Although the effect of this decision on Pyongyang's revenues are rather limited, the closure of the complex, as the only symbol of tangible cooperation between the two

sides, showed the current sentiment of South Korea towards its authoritarian neighbour. Seoul's concern for an eventual military escalation led the government of President Park to try and create a network of alliances, to isolate and corner Kim's regime.

This involves primarily the historically, the United States, with which the South Korean government is trying to reinforce cooperation in the security and defence field. A first step in this direction has consisted in choosing to test the strategic "Operation Plan 5050" in the framework of the "Key Resolve" joint annual drill, during the first week of March. This plan is meant to test pre-emptive attacks in order to prevent a possible use by North Korea of weapons of mass destruction. Military drills are part of a broader strategic dialogue started by Park and Barack Obama, which will be carried on by high officers from both countries in the upcoming months, intended to outline a road map to neutralize the North Korean threat. Apparently, this initiative shall increasingly involve also the Japanese government. The American activity, in fact, is facilitating the dialogue between Seoul and Tokyo, which, in order to maximize the impact of the initiatives against Pyongyang, are now favourably inclined to pay less attention to the usual bilateral issues that have been plaguing their relationship. Washington's resolve in neutralizing as soon as possible the North Korean threat was alreadv clear after the dav the abovementioned ballistic test, when both



Congress and President Obama launched new sanctions against the North Korean regime. However, in order to achieve the desired effect in the most comprehensive way possible, besides usual unilateral initiatives the White House is now aiming to involve all the regional actors, by reaching out not only to traditional allies, but also, or especially, to China.

As the main commercial partner of North Korea, Beijing's collaboration in isolating Kim's regime is essential in making the sanctions actually effective. Because of the Chinese government's choice of keeping a dialogue open with Pyongyang, in fact, in the past the effectiveness of international trade restrictions has been partly reduced, in order to allow the North Korean regime to resist international pressures. After all, Beijing has always looked with concern at a sudden collapse of North Korea. On the one hand, because North Korea has always been an important strategic buffer for China, since so far it has managed to keep US Forces stationed in South Korea away from its border. On the other hand, because an unpredicted end of the regime would create a huge economic and humanitarian crisis, whose costs would burden also the Chinese government. While, at least until 2011, these motivations have convinced China to protect its troublesome neighbour, Kim Jong-un's sclerotic behaviour seems to have compromised the relationship between the two countries. This trend should find a confirmation in the decision made by Chinese President Xi Jinping of aligning his Country with UN sanctions, so to join the international initiatives aimed at pushing North Korea to give up its nuclear efforts.

Now that the international condemnation against the North Korean regime is almost unanimous, the focus will be on finding a compromise on the stance towards Pyongyang, in order for the regime's international isolation to be just the first step in order to eradicate the nuclear threat from the region.

From its part, almost a month from the historic KWP Congress, the first since 1980, the Supreme Leader does not seem open to compromise. The choice of holding the Congress after 36 years from the last one, in fact, looks like his attempt at rallying the party around himself and celebrating the myth of his leadership. As the event approaches, Kim Jong-un may need to feed the nationalistic rhetoric and to do so the Regime may exasperate the confrontation with the International Community and increasingly strain the already exacerbated situation in the area.

Eight years after the last meeting of the Six Party Talks (the negotiations on Pyongyang's nuclear programme held by China, United States, South Korea, Japan, Russia and North Korea), the short-term chance of a new dialogue table seems currently far away. South Korea, United States and Japan, in fact, appear determined in stopping the nuclear tests and all related



activities before Pyongyang can return to the table. However, in the event of stronger military cooperation among the three countries or of increased naval military activity, both aimed at deterring North Korea from carrying on nuclear trials, China could suddenly decide to step back. Hours right after the last nuclear test, in fact, talks Seoul and Washington between for permanently installing the US THAAD⁶ antimissiles system in South Korea angered Beijing, since it was considered as a dangerous shift of the regional balance of power. Even just the possibility of a military escalation could push Beijing away from an agreement with the other parties. In this context, a key factor could be the effect of economic sanctions on the finances of the North Korean Communist Party. More than the embargo on any material directly or indirectly linked to nuclear proliferation, an important role could be played by sanctions on the national financial system and on the import of luxury goods. The latter, in fact, can affect directly the interests both of a portion of the Country's leadership, which exploited the rigidity of system to build parallel network of personal privileges, and of a small elite of new riches, who made their fortunes thanks to the black market.

A rigorous application of bilateral and UN regulations would close any channel with the outside and would endanger the assets and

the economic power of the ruling class. It is not to be excluded that, on a mid-term outlook, the isolation imposed on North Korea could instil inside the establishment a feeling of dissatisfaction towards the leadership of Kim, who would be then perceived only not as the person responsible worsening the already for problematic national economy, but also for their loss of personal wealth. This disappointment could become an important window of opportunity for the International Community, in order to find a partner more inclined to dialogue and compromise, to be used as an indirect tool to put the regime under pressure and to weaken its solidity from the below.

⁶ The Terminal High Altitude Area Defense system is an anti-missile defense system aimed to intercept mid and long-range ballistic missiles.