

Why nuclear intelligence is vital for Bangladesh



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As Bangladesh prepares to begin commercial operation of the Rooppur Nuclear Power Plant (RNPP) in late 2025, the promise of cleaner, reliable baseload power is now closer to reality. Yet with this milestone comes a parallel responsibility: ensuring the highest standards of nuclear security. Nuclear security refers to the prevention, detection, and response to theft, sabotage, unauthorised access, or any malicious act involving nuclear and other radioactive materials or related facilities from both external and internal adversaries. The International Atomic Energy Agency (IAEA) consistently underscores that the success of nuclear operations depends not only on technological excellence but also on resilient and adaptive security frameworks. Within this context, nuclear intelligence (NUCINT)—the collection, analysis, and interpretation of information related to nuclear and radiological threats—emerges as a cornerstone for safeguarding national security, peace, and stability.

Bangladesh is situated in a strategically sensitive region, bordered by nuclear-armed India and Pakistan and lying close to unstable Myanmar. The country's geographical position, porous borders, and expanding critical infrastructure make it vulnerable to nuclear smuggling, trafficking, sabotage, and insider threats. Nuclear intelligence serves as an invisible shield, providing early warnings about illicit activities and improving the country's ability to detect, assess, and respond to threats involving nuclear or radiological materials. For instance, integrating spectral data from handheld and portal detectors at border checkpoints can help identify radioactive anomalies in cargo, transforming isolated security measures into a proactive intelligence network.

Nuclear security traditionally relied on the "3Gs"—guards, gates, and guns—focusing on a physical protection system. However, as technology has evolved, so have the

threats. Modern security now includes cyber protection, nuclear intelligence, and insider threat mitigation. Today, adversaries do not only attack from outside; insiders with access or knowledge can cause equal or greater harm. Ideologically motivated adversaries (criminals or terrorists) may exploit vulnerabilities in transport, storage, or operational stages of nuclear material. External adversaries such as Al Qaeda or ISI have historically sought nuclear or radiological materials for malicious use, including the creation of "dirty bombs" or nuclear weapons.

Thus, NUCINT bridges physical, cyber, and human dimensions of security. It uses tools such as gamma-ray spectroscopy to detect enriched uranium, neutron sensors to identify reactor anomalies, and AI-assisted analytics to flag abnormal behaviour. Deployed at key entry points—such as Chittagong or Mongla ports, where nuclear fuel enters the country—these systems transform isolated checkpoints into a national detection network.

International obligations and Bangladesh's commitments

Bangladesh's approach to nuclear intelligence is shaped by international laws and standards. The Convention on the Physical Protection of Nuclear Material (CPPNM) and its 2005 Amendment obligate states to protect nuclear materials during storage, use, and transport. Complementary global conventions criminalise nuclear terrorism, terrorist bombing, and financing of terrorism. UN Security Council Resolutions 1373 and 1540 oblige states to prevent non-state actors from obtaining weapons of mass destruction and to cooperate on intelligence and law enforcement. Bangladesh adheres to these commitments and aligns with the IAEA's Code of Conduct on the Safety and Security of Radioactive Sources and its import-export guidelines. Together, these instruments guide national policy, regulatory practices, and intelligence sharing with the

IAEA, Interpol, and UN bodies.

Bangladesh has strengthened its nuclear governance through several laws, including the Bangladesh Atomic Energy Regulatory Act (2012), Chemical Weapons (Prohibition) Act (2006), Anti-Terrorism Act (Revised 2012) and its Rules (2013), and the Money Laundering Prevention Act (2012). These laws regulate nuclear materials, ensure safe transport, prevent financing of illicit activities,

port bound for China. In 2022, high-value electrical cables were stolen from RNPP cranes, allegedly involving insider knowledge.

These incidents may not represent major nuclear crises, but they reveal weaknesses in detection, coordination, and intelligence-sharing. They highlight the necessity of a national NUCINT system that links border security, law enforcement, regulatory bodies, and plant operators.



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and empower authorities to investigate and prosecute nuclear-related crimes. Yet, without intelligence-led implementation, legal tools remain reactive rather than preventive.

A few past incidents underscore why nuclear intelligence is urgently needed. In 2003, four members of a banned militant outfit were arrested for attempting to smuggle 225 grams of uranium oxide near the Indian border—later traced to Kazakhstan—potentially usable in a "dirty bomb." In 2014, police in Dhaka seized a "uranium-like" substance along with a radiation meter and a gas mask. In 2017, radioactive material was detected in a container at Chittagong

Policy and intelligence integration

Global cyber-attacks—such as cyber intrusions on Iranian nuclear facilities—have proven that nuclear security now extends beyond physical barriers. Digital systems that control reactors, cooling systems, and radiation monitoring devices can be targeted remotely. For Bangladesh, cyber-nuclear intelligence must be integrated into security planning to monitor network traffic, predict anomalies, and intercept malicious codes before they disrupt safety systems.

To institutionalise NUCINT, Bangladesh could consider establishing a nuclear intelligence cell under the National Security Intelligence (NSI). This unit should

include experts in nuclear engineering, cybersecurity, law enforcement, radiation science, AI analytics, and emergency response. Recruitment must be merit-based and technically rigorous to maintain credibility and confidentiality.

The cell would act as a central coordination hub, linking the Bangladesh Atomic Energy Commission, Bangladesh Atomic Energy Regulatory Authority, Nuclear Power Plant Company Bangladesh Limited, security agencies, universities, customs, ports, coast guards, and the Prime Minister's Office. Its role would be collecting and analysing intelligence related to nuclear materials and threats; facilitating real-time data sharing among stakeholders; conducting risk assessments, tabletop exercises, and incident simulations; and coordinating with international bodies like the IAEA, Interpol, and Saarc regional platforms.

For Bangladesh to become a responsible nuclear state, several priorities are essential: integrate physical, cyber, and nuclear intelligence systems for real-time situational awareness; establish a national detection architecture with portal monitors, drones, mobile labs, and handheld devices at ports, airports, and border crossings; develop a nuclear forensics laboratory to trace intercepted materials and support criminal investigations; train specialised personnel in radiation detection, cyber-defence, intelligence analysis, and crisis communication; enhance regional cooperation with India, China, and Saarc states and global partners like IAEA and Interpol to share best practices and intelligence.

Nuclear intelligence is not merely a technical tool or a silent report. It is the nervous system of nuclear governance and the country's sovereignty, built on integrity and sensitivity, and designed to turn invisible threats into actionable insights. As Bangladesh transitions from a nuclear newcomer to an operating nation, NUCINT must serve as its first and last line of defence. If Bangladesh institutionalises nuclear intelligence, strengthens communication among agencies, and develops knowledgeable human resources while upholding regional and international obligations, the country will emerge as a responsible nuclear nation. The atom must remain a symbol of peace, prosperity, and progress—not a source of risk or danger.

Redirecting money spent on migration will boost small businesses



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Every year, about 22 lakh young Bangladeshis enter the job market. Finding no work, nearly 10 lakh borrow or sell family assets, each spending Tk 5-10 lakh to migrate abroad for menial jobs and many end up exploited or even perish at sea. If we do the math, that's over Tk 75,000 crore leaving the country every year. If even a fraction of this were invested locally—say by one or two lakh of those youths—employment and GDP both will be boosted. Skilled workers could still go abroad as respected professionals rather than cheap labour.

A major criticism of the interim government is its failure to come up with a clear plan to lift millions out of poverty or revive the economy. Yet this could be achieved even within the few months the government has, if certain policies were changed.

Based on my four-decade-long work with small and medium enterprises (SMEs), I can assert that Tk 5 lakh is enough to start a small

enterprise. So why don't people invest? The answer is fear. Entrepreneurs are constantly harassed because of trade licenses, VAT, and tax rules that empower predatory officials. Rent seekers linked to political networks inflate costs further. These expenses, of course, cannot be shown in official accounts, but then small entrepreneurs (SEs) are often accused of keeping excessive margins and end up being punished by mobile courts through crippling fines or even jail sentences. The result? The life savings and years of effort of these entrepreneurs collapse.

Perhaps that is why many young people risk dangerous journeys across the Mediterranean Sea rather than investing in a small business at home. This fear, not lack of funds, blocks the potential for huge local investment.

What needs to be changed

The remedies are not complex, but they demand courage, understanding of local realities and humane behaviour from

policymakers. Also, we need to ask ourselves, what is it that we want from the SMEs? Obedience to strict government regulations, whether practicable or not, or being able to deliver good quality products and service to consumers? I believe the latter is the answer, as I put forward some suggestions to this end.

Create a distinct SE category requiring special support to survive and grow. Remove "Medium" enterprises from the SME label. The millions of youth we are talking about start small.

A recent SME Foundation study found 90 percent of SMEs never took bank loans, yet policy circles keep fixating on credit. What the entrepreneurs need most is an environment that lets them experiment and grow. The amount spent on migration alone dwarfs any credit programme.

SEs should be exempt from trade license, VAT, and income tax. Government revenue from them is negligible, but entrepreneurs lose a lot to corruption. Someone once raised a question why a paddy thresher seller needs a license for selling the machine when a farmer does not need a trade licence to grow paddy.

Rather than policing, launch a responsible entrepreneurship campaign so that producers self-regulate, maintain quality, and protect the environment. Mutual trust among producers, traders, and consumers will prove stronger than fear-based enforcement. A system built on fear encourages a culture of bribery and drives good products out of the

market. In addition to the formulation of favourable policies, strong oversight is vital.

Transform the Directorate of National Consumer Rights Protection into "Seed," whose officers would train small entrepreneurs in management, accounting, and technology—directly, or through partnerships with Bangladesh Council of Scientific and Industrial Research (BCSIR),

Bangladesh Industrial and Technical Assistance Center (BITAC), Bangladesh Machine Tools Factory Limited (BMTF) and universities. Instead of policing, Seed should provide advice, consultation and motivation, strengthening the entrepreneurs and awakening their inner sense of responsibility. Merge SME Foundation and Bangladesh Small and Cottage Industries Corporation (BSCIC) into Seed, creating one dynamic agency. Seed should not give loans or build industrial zones; banks and private initiatives can do that. However, Seed should link up SEs with them and create employment for thousands of university graduates.

Agriculture flourished in Bangladesh because of a tax-free environment, which eliminated harassment. Furthermore, the Agriculture Extension Department provided necessary support and advice. SEs deserve the same.

Most small ventures start as home experiments. Forcing them to move to distant commercial zones will kill the initiative. China allows countless home-

based businesses, drawing on family and community workforce. In Bangladesh, they exist unofficially and entrepreneurs' fear of the authorities often pushes them to operate in hazardous conditions. Legalising home-based enterprises under Seed's supervision would allow them to take adequate safety measures and unleash huge grassroots industrialisation.

Large Bangladeshi industries depend entirely on imported technologies and cannot adopt indigenous innovations. Hence, very few products developed by BCSIR over the last seven decades reached the markets. Universities and research bodies must build active partnerships with small rather than large industries. Seed can coordinate this collaboration.

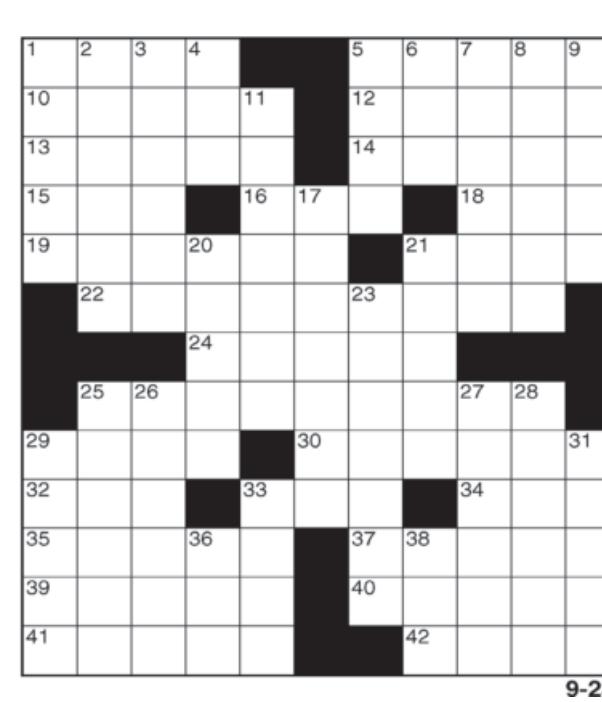
Each year in Bangladesh, millions of youths seek work, while billions of dollars flow out through migration. Yet the alternative lies within reach. If policy shifts from courting foreign investors to empowering local entrepreneurs, the nation can mobilise its own capital for productive growth. Investing in small enterprises is not charity; it is smart economics, the fastest route to job creation and resilience.

Supporting small enterprises can transform Bangladesh from a remittance-dependent nation into one driven by innovation, dignity, and self-reliance. The capital exists. The youth are ready. Only courage and vision are needed from our policymakers.

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18 Phone bill
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19 2015 Paul Rudd
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21 Campus area
22 Deficit
24 Characteristic
25 Cascade
29 Ring of light
30 'Gave it my best'
32 Nest item

33 Low digit
34 Butter unit
35 Battery end
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