

# The Security World



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Factors Leading Transnational Threats as State Concern

Nepal-Bangladesh trade relations

“Rishilpi” a special Bangladeshi- Italian rural community advancement project in Satkhira

Political Economy of Reinventing Bangladesh Railway

Changing Nature of Global Conflicts: Role of the UN Peacekeepers

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# THE SECURITY WORLD

AN WEEKLY NEWS MAGAZINE

THE SECURITY WORLD

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The Security World is being published with the primary purpose of promoting peace, security and international cooperation through analysis, policy dialogue and dissemination of information. We are also trying to focus on the contributions of our defense forces and law enforcement agencies in curbing terrorism and their role in the international arena to bring back peace and security. As there is no noteworthy publication to project these achievements, we believe the Security World will play a pivotal role in this regard.

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# Changing Nature of Global Conflicts

## Warfare evolves faster than warfighter do

General Manoj Mukund Naravane



Indian Army Chief General MM Naravane who is leading the 2nd largest armed forces in the world by active duty military personnel, with about 1445000 active soldiers de-

livered a keynote speech on Changing Nature of Global Conflicts: Role of UN Peacekeepers' during the Army Chief's conclave organized by Bangladesh Army Chief General Aziz Ahmed.

The Bangladesh Army hosted the conclave coinciding with the celebrations of the birth centenary of the country's 'Father of the Nation' Bangabandhu Sheikh Mujibur Rahman and the 50th anniversary of Bangladesh's independence.

Force commander of UN multidimensional integrated stabilisation mission in Mali Lieutenant General Dennis Gyllensporree, force commander of UN multidimensional integrated stabilisation mission in the Central African region Lieutenant General Sidki Daniel Traore and Bhutan army's deputy chief of operation Brigadier General Darji

Rinchen, among others attended the conclave.

Senior diplomats, security strategists and police officers also attended the seminar. The Indian Army chief has interacted with the senior officers of the participating nations and military observers from the other nations.

The conclave was held as part of a multilateral UN-mandated counter-terrorism exercise, Shantir Ogroshena (Frontrunners of Peace). An Indian Army contingent of 30 personnel have participated along with the Royal Bhutan Army, Sri Lankan Army and Bangladesh Army in the exercise.

Military observers from the US, UK, Turkey, Saudi Arabia, Kuwait and Singapore have also attended the exercise. The aim of the exercise is to strengthen the procedures and enhance interoperability amongst neighbourhood countries to ensure robust peacekeeping operations in the region. The armies of all the participating nations shared their valuable experiences and refined their drills and procedures in peacekeeping operations.

Here we are publishing a short extract from the key note address of Indian Army Chief General MM Naravane.

The relations between India and Bangladesh are ▶



*Indian Army Chief General MM Naravane meets with Bangladesh Army Chief General Aziz Ahmed.*

► anchored in shared history and common heritage, a history of struggle for freedom and liberation. We take great pride in our role and contribution during the War of Liberation. The blood and valour of the martyrs of both nations is written in gold in the annals of history.

The world, by and large, is slowly recovering, from a year long fight with COVID. However, the last one year has seen unprecedented changes. The disruptive powers of the pandemic, have been adequately demonstrated and acknowledged. We have seen the change compressed in time, and come to accept that many things will never be the same again. The total break-down in global supply chains have caused us to pause and reflect on their frailty and vulnerability, forcing us to re-engineer our dependencies and explore local solutions to local problems.

So, there is little denying that change is upon us like never before. And, the real driver for this

rapid pace of change, is the advances made in Technology. Successive technological revolutions are occurring at smaller intervals. The advent of rapidly evolving, dual-use technologies present new opportunities and are changing the very character of warfare.

In my talk today, I shall share my views on this very **Changing Character of Conflict, and the Role of UN Peacekeepers in this new paradigm**. As two of the largest troop contributing nations to the United Nations, the subject holds special relevance in the context of India & Bangladesh.

### **Changing Character of Conflict**

The character of conflict has been constantly evolving over the years, albeit the pace has picked up exponentially in recent times. The nature of war in terms of the **organised nature of violence**, in terms of the blood and gore, in terms of the **victor** imposing his will on the **vanquished**, is constant and unchanging. As to how wars will be ►

- ▶ fought in terms of weapons, technology and the strategic context, however, changes rapidly. **So, while the nature of war is constant, the character keeps evolving and changing. Since, the nature of war is unchanging, force and violence have not disappeared.**

*They have only manifested in newer forms.*

This change has panned out in various conflicts across the world in the year gone by. We have seen how the very imaginative and offensive use of drones in Idlib and then in Armenia - Azerbaijan, shaped the outcome of the conflicts.

We have also seen how **disruptive technologies** are now driving doctrinal cycles like never before. It may not be inaccurate therefore, to infer, that **technology** itself is steadily emerging as a **core combat capability**. Niche technologies like artificial intelligence, quantum computing, 5G, autonomous and unmanned systems, precision technology etc have become the new drivers of technological revolution.

Wars are no longer confined to the customary hard core kinetics but are

being contested in the **ambiguous grey zone**.

This is characterized by ambiguity, uncertainty and a careful, pre-meditated risk escalation to keep actions below the threshold of all-out war.

*In the Grey Zone, militaries play to the edge.*

**Geo-strategic spaces are being constricted without altering the state of peace; geo-strategic realities are being altered without a shot being fired.**

The traditional, rather simplistic and straight-jacketed war and peace disposition, has therefore, lost its relevance in the face of vigorous jostling for **competitive spaces short of all out conflict**. In this 'No War No Peace' state of flux, asymmetric use of technology is likely to render the conventional military might redundant to a certain extent.

Conflicts are also steadily moving into the newer domains of space, cyber, and informatics. Mere mastery of the traditional domains is not adequate.

Yet another character of this changing conflict paradigm is the threat posed by new actors, state & non-state, both in the kinetic and non-kinetic spaces. Military threats are **assuming a trans-national form with external linkages to global organisations** with similar agendas & ideologies. Armed conflicts are turning intractable and harder to resolve due to rise of transnational illicit networks, increasing internationalisation of civil wars or local conflicts and involvement of violent extremist groups. **With non-military means increasingly gaining importance**, multi-domain operations are going to be the norm in future and the lines of operations will present an amalgamation of threats.

Armed Forces the world over would need to adapt to this change to remain relevant and effective. In order to illustrate my point, I would like to relate it to the game of cricket, which we in the subcontinent understand better than anyone else.

**The form and character of the game, continue to evolve from the traditional Test Cricket to 'Ltd Overs' and now the T 20. However, the skill sets for the shorter version and ofcourse the approach to the game, is significantly different. While the longer version of the game affords time to adjust and adapt to the conditions, the shorter format demands far greater mental and physical agility. Every delivery wasted is a lost opportunity. You also require more all-rounders, players with multiple skills ready to assume different roles. You can't expect to win the T20 match if you are training & preparing in the Test cricket mode.**

Armies need to change, and change quickly. Our Forces Structures, Doctrines and Strategy, Rules of Engagement and Capability Development ini- ▶▶

- ▶ tiatives need to be aligned to the evolving security paradigm. But unfortunately that is not always the case. Armies are conservative by nature and guilty of preparing not only for the last war, but often for the wrong war.

*This is the simple truth of history - warfare evolves faster than warfighters do.*

The challenges to troops operating under the UN mandate, in some of the most difficult and conflict inflicted areas in the world, need to be seen and understood in this contemporary threat paradigm.

### Role of United Nations

The United Nations, by far, remains the **most internationally represented multilateral organization** mandated with the role of maintaining international peace and security. Pursuant to its charter, the UN objectives include protecting human rights, delivering humanitarian aid, promoting sustainable development and upholding international law. UN peacekeeping is a unique, important, complex, diverse and dynamic instrument that is built on global partnerships. Each operation is based on **basic principles of peacekeeping – consent, impartiality and non-use of force except in self-defence and in defence of the mandate.**

### Changing Nature of Conflict : Impact on UN Peacekeeping

As you would agree, the changes in conflict dynamics have generated a range of challenges to UN peacekeeping operations. **Originally designed to support inter-state ceasefires and peace agreements**, modern peacekeeping operations have transformed to address intra-state conflicts, failed & fragile states and situations involving asymmetric use of force, including from violent extremist groups. Moreover, growth of non-state actors wielding new technologies, transnational illicit networks

and globally connected violent extremist groups, as I have discussed earlier, pose new challenges.

**Some of you would have seen the recent report by a UN investigation team of experts, on the deadly missile strike at Aden airport in Yemen, last December that left 22 dead. Only the Houthi rebels, says the report, possess the ability and technology to undertake this type of strike. These potent capabilities, which earlier were the preserve of the State, are today in the hands of terror organisations and non-state actors. These developments need to be factored in, while planning peacekeeping operations.**

Moreover, **shifting geopolitical and regional dynamics** are further challenging UN's ability to **exert influence over conflicts sustained by proxies & regional interests.** It is evident that economic constraints in the

aftermath of the pandemic, will have a direct bearing on budgetary support to Peacekeeping Operations.

The emerging trends of conflict-most notably-the **influence of niche technologies**, the **impact of climate change** on security and **rapid urbanisation or migration** will alter risk profiles around the world and have major implications on design and conduct of peacekeeping operations. The effect of these trends on peace keepers and their role in managing conflicts needs to be understood and analysed to address the issue in right earnest.

**Even the UN organs will need to shed some of the old practices and adapt to these changes.**

### Role of UN Peacekeepers

**Proactive Apch.** As part of the UN's new strategic thought, the UN Secretary General, has stressed upon the **'Requirement of Conflict Prevention and Peace Building'** rather than on **'Peacekeeping'**. This calls for a proactive, integrated, multi-dimensional effort involving political, civilian and ▶



Foreign Minister AK Abdul Momen, MP participated in a photo session with local and foreign military personnel who participated in the seminar titled "Army Chiefs Conclave" held at the Multipurpose Complex in Dhaka Cantonment recently. Photo: ISPR

► military lines of operations. The focus of peacekeeping operations should hence be to **create favourable conditions to include disarmament and neutralisation of negative forces, establishing rule of law and protection of civilians.**

**Exit Strategy.** The transformation required for transition from a volatile conflict situation to a stable political and social environment requires concerted and coordinated efforts from all agencies involved. The troop contributing nations need to **analyse the operational and political situation** to effectively prepare their contingents to meet these challenges. With increasing deployment span of some peacekeeping operations, missions may be deployed for a long duration with little prospect of securing sustainable peace.

With the changing conflict dynamics, UN should be **pragmatic in defining the mandate of the mission and the designing of peacekeeping operations should be based on a realistic exit strategy** with definable objectives and missions.

**Innovative Partnerships.** Peacekeeping partnerships must translate into discernable results

through greater clarity on mandated tasks, timely deployment of capabilities, **greater readiness to implement critical mandated tasks, and ability of swift response in crisis.** The UN has successfully **partnered with regional organisations** for enhanced operational effectiveness (e.g. deployment of African Union troops in Somalia).

Due to changes in conflict dynamics, UN needs to **invest more in such partnerships.** The troop contributing countries need to build capacities to ensure interoperability with regional forces under UN mandate in order to reduce time and costs.

**Rapidly Deployable Forces.** The evolving nature of conflicts mandates the **requirement of maintaining a reserve of peacekeepers** within the conflict zone or with the member state(s) as Rapidly Deployable Forces with strategic and tactical mobility through dedicated mobility assets and logistic echelons capable of rapid and swift deployment across the globe.

**Lines of Operations.** The lines of operations, primarily based on the mandate of the peacekeepers, need to also incorporate emanating threats. The ►►

- ▶ UN should facilitate a **'whole of mission approach'** with unhindered support of assets at UN's disposal. The suggested lines of operations may include:-
  - (a) Intelligence based operations, against negative forces or spoilers.
  - (b) Protection of civilians and human rights and extending rule of law.
  - (c) Integration of parties through dialogue, disarmament and trust.
  - (d) Campaigns to highlight impact of peacekeeping operations.
  - (e) Building capabilities and capacities of host organisations & forces.

**Conduct of Operations.** The conduct of operations at tactical level should include a combination of kinetic and non-kinetic means, as defined by Rules of Engagement. The operations should be supported by **force enablers in terms of ISR, communication, mobility, force protection and flexible logistic support.** The essential aspects of operations should include the ability to project force capable of undertaking mandated tasks, protection of civilians and force preservation.

**Infusion of Latest Technology.** There is an inescapable need to technologically enable the peacekeepers to effectively manage situation in operational areas. The contributing countries need to provide tactical force multipliers like UAVs, surveillance devices and modern communication equipment to their contingent. Infusion of technology and force multipliers like aviation and logistics assets will remove limitations and enable the contingent to thwart challenges in achieving the mandate.

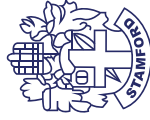
General MM Naravane, PVSM, AVSM, SM, VSM, ADC did his schooling at Jnana Prabodhini

Prashala, Pune. An alumnus of the National Defence Academy and the Indian Military Academy, he was commissioned in the Sikh Light infantry Regiment in Jun 1980. He is an alumni of the Defence Services Staff College, Wellington and Higher Command Course, Mhow. The General Officer holds a Master's Degree in Defence Studies, an M.Phil Degree in Defence and Management Studies, and is currently pursuing his Doctorate.

In a distinguished military career spanning almost four decades, he has the distinction of tenating key command and staff appointments in 'Peace and Field, both in the North-East and Jammu and Kashmir and has been part of the Indian Peace Keeping Force in Sri Lanka. He brings with him an enormous amount of experience in serving in the most challenging areas. He has commanded a Rashtriya Rifles Battalion, raised an infantry Brigade, was inspector General Assam Rifles (North) and has commanded a prestigious Strike Corps. His staff assignments include tenures as a Brigade Major of an infantry Brigade, Defence Attache at Yangon, Myanmar, an instructional appointment in the Army War College as Directing Staff in the Higher Command Wing, besides two tenures at the integrated Headquarters of MoD (Army), New Delhi. He had the privilege of commanding the Republic Day Parade in 2017 in his capacity as GOC Delhi Area. After successfully commanding the Army Training Command, Shimla and the Eastern Command in Kolkata, he held the appointment of Vice Chief of the Army Staff before assuming the appointment of the Chief of the Army Staff on 31 Dec 2019.

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**General Manoj Mukund Naravane PVSM, AVSM, SM, VSM, ADC, Indian Army Chief.**



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# Factors Leading Transnational Threats as State Concern

General Aziz Ahmed



## *Unprecedented Advancement in Information Technology*

The last decades have also seen unprecedented advancement of information technology. Nowadays, people and information are just at

one click distance away from one another. Through the internet and smart communication gadgets, information can reach around the world in seconds. However, the advancement of technology has become double-edged, offering the scope of positive uses on one hand and facilitating the coordination, planning, and execution of criminals operations on the other.

As transnational threats are conducted across the borders along a long geographical stretch over a substantial time, continuous communication, coordination, monitoring, and supervision are of critical importance for such organized crime. Mobile phone and internet technologies through en-

hanced communication have enabled the conduct of such organized crime-related huge and continuous functions with speed, reliability, and safety through digital avenues.

The ascent of information technology not only offers quick and direct communication facilities to the Transnational Organized Crime groups but also offers advantages in many other dimensions. "First; Organized crime is familiar with the rapid spread of technological progress and normally gains faster and more efficient access to technological resources than others. With strong financial organizing power, they easily acquire and customize the IT facilities for their criminal purpose to conduct the crimes. Second; through virtual presence, IT allows the organizations to be flexible, eliminating the need for an actual base, office, and physical presence of individuals throughout the channel of organized crime. It has greatly reduced the frequency of physical movements of criminals and their associates to avoid detection. Third; IT facilities allows paperless planning, conduct, and coordination through virtual link causing the reduction of accumulated paperwork. Hence, it eliminates incriminating documentary evidence causing security agencies ►



*BGB's strict surveillance on border.*

- ▶ further investigation and proves difficult. Fourth; identification and detection process of information and instructions passed to conduct the crimes through IT channels are high-technology depended” (Kristin 2010).

Many of the security and intelligence organizations of under-developed and developing countries are not equipped at par with the technological capability of Transnational Organized Crime Groups. Thus, IT has offered the transnational threats a hidden channel of communication that is less vulnerable to a breach of security. “Legislation used to control and curb some of these online activities may not be applicable when servers are based in other countries hindering effective pursuit and stamping out of such illicit activities” (Sangiovanni 2005). Thus, as IT developed in wider and faster space Transnational Organized Crime groups became less vulnerable to state repression that facilitated their faster and wider growth over the last decades.

#### ***Liberalization of Laws and Rules***

Globalization and liberalization are interlinked and complementary to each other. Liberalization

generally means abolishment of tighter state control on economic activities. It calls for the elimination and relaxation of economic policies, rules, and regulations for better economic integration amongst nations. For example, India adopted “New Industrial Policy (NIP) in 1991 to initiate liberalization that focused on the abolishment of licensing and documentation in business, liberalization of foreign investment, relaxation of locational restrictions, liberalization of foreign technology imports, phased manufacturing programs, public sector reforms, restructuring monopolies, and restrictive trade policies, etc.” (Jose 2016).

One of the major aspects of liberalization in the economic sector is trade liberalization that reduces restrictions on imports or exports and facilitating free trade. Free trade allows the countries to trade goods, products, services, and technologies without the restriction of regulatory barriers or related costs. However, the lesser the regulatory control on the trade of goods and products, the easier it is for Transnational Organized Crime groups to conduct transnational crimes. With the liberalization in global trade and commerce, Transnational Organized Crime groups also find reduced barriers to

- ▶ ers in carrying out their business, both legal and illegal, across the states.

### ***Faster Mobility and Bulk Transportation***

Revolutionary improvements in transportation and communication decreased the physical barriers around the world, making it easier for Transnational Organized Crime groups to operate across the border. With the emerging trend of globalization, the international transportation system came under constant pressure to support the globalization of production and consumption.

The development of the transportation system has many dimensions like infrastructure development, interlinking, volume, capacity, speed, efficiency, and safety. Standard containerization (20ft long, 8ft wide, and 8ft height) at a global level facilitated worldwide transportation of goods in freight, ship, road, or railway. This has opened the scope of the intermodal transportation network to be highly effective. Intermodal transportation is networked transportation of goods through a network comprising road transports, railways, ships and freight. Now a container can be air-lifted to port, shipped through the sea, and distributed in trucks to targeted markets.

Faster mobility and bulk transportation have also offered the transnational threat a wider scope to intrude into the global transportation system. As advancements in mobility and transportation, have facilitated the integration of domestic markets in a global platform, these same forces have also fueled the rise of transnational threat.

### ***The spread of Internet Banking Facilities***

With the rapid growth of world trade system, a parallel development in the financial networks has taken place in terms of ease, speed, and diversification. Unprecedented progress in internet facilities enabled banking sectors to diversify and develop new options and services with ease and

speed. Riding on unprecedented advancement in IT, financial infrastructure has gone global. Today 'bitcoin' or 'megabyte money' can instantly move anywhere in the world.

The advancement and diversification of the global financial system have also facilitated organized crime groups to transfer profits gained from illicit activities rapidly, easily, and without being detected and punished. "Together with the huge amount of money in circulation within the system and the ease with which it can be transferred at high speed, have greatly favored a basic stage in any illegal business: money laundering" (James 2020). Money laundering is only one of the basic aspects, but internet banking has enabled transnational threats to transfer money, make and receive payments for their criminal activities across the globe, avoiding physical transactions.

Complexity and lack of supervision on international financial activities also make it extremely difficult to enforce regulations. Such virtual global banking facilities through the internet have made criminal activities easier through electronic money transfers and transactions. Additionally, this has also paved the way for transnational cyber criminals to hack and attack financial institutions to illegally take away a large amount of money. The cyberattack against Bangladesh Bank in February 2016 showed how severely the cybercrime has spread over the global banking system. Cybercriminals managed to hack into the central bank's security system and illegally transferred \$101 million of funds from its account. However, be it money laundering or hacking of accounts, in general, internet banking facilities of virtual financial transaction has facilitated the growth and function of transnational threat in the last decades.

### ***Increased Migration and Ethnic Link***

Post -Cold War era has also witnessed an increasing trend in migration. The rise of intra-state and ▶

▶ regional conflicts caused forced displacement of people which was facilitated by available knowledge of well-being prevailing in other parts of the world through social networks and mass media and the progress made in transportation. Such factors resulted in two important global trends. Firstly; an increase in immigration flows and secondly; the gradual creation of ethnic networks throughout the globe. “Despite the vast majority of immigrants being respectful to the laws of the host countries, criminal organizations have taken advantage of this ethnic dispersal to develop their transnational networks within which they are in permanent contact through advanced communications systems” (Myers 1995).

Post-migration politico-socio-economic challenge of many immigrants facilitates their intrusion into black markets and chain of criminal worlds. “Ethnic links, with their systems of loyalty, solidarity, and sanctions often superimposed on the legislation of the countries where immigrants live, indirectly facilitates the implantation of organized crime” (Reinares & Resa 2005). Increased global migration is also exploited by organized criminal networks. Organized crimes like human trafficking and illegal migration can easily be submerged under the flow of migration. “Human and commercial flows are too intense to easily distinguish the illicit from the licit” (Nelken 2008; Sangiovanni 2005).

### Factors Leading Transnational Threats as State Concern

#### *Gaining a Global Dimension*

Earlier transnational threats were characterized by crimes that occur across the states. Decades ago, most of the Transnational Organized Crime networks had a regional dimension, but now it has grown into global ones. Amongst several factors, globalization, trade liberalization, unprecedented advancement in the IT sector, and faster communication and transportation facilities played the most contributing role in the dimen-

sional expansion of transnational threats. Antonio Maria Costa, former Executive Director of the United Nations Office on Drugs and Crime, effectively summarized the change in transnational threat over the last quarter-century by saying, “as unprecedented openness in trade, finance, travel, and communication has created economic growth and well-being, it has also given rise to massive opportunities for criminals to make their business prosper” (UNODC 2010).

Leveraging the scopes offered by globalization, IT, and faster communication and transportation networks, transnational threats are spreading faster than before. IT-based communication facilities eliminated their need for actual contact. Now, they can successfully establish and spread their links to any part of the world without physical presence. Organizing and conducting the crimes in another country or region does not require criminal gangs to cross the boundary to be physically present there. They can organize and coordinate the conduct of criminal activities across the states and regions being present in one area or country.

Globalization requires speedy trade and transshipment of goods and individuals. Consequently, rules and restrictions on trans-border trade and commerce are liberalized. Bulk, faster, and longer transportation networks are also developed to sustain the speed of globalization. Transnational threats are also exploiting such scopes and opportunities to spread the crime network across the states and regions.

As a whole, no transnational threat networks are isolated today. They are collaborating from one region to another forming global platforms. Drugs produced in South Asia today can easily reach the market of the USA, taking advantage of globalization and communication facilities. Such global stature of transnational threats is turning them beyond the capacity of states and regions to deal with. ▶

► In recent years, that viewpoint has changed. The character of transnational threat has changed in three major ways since the war on drugs began. Drug trafficking has become more diversified, criminal networks have harnessed new methods of conducting business, and the structure of criminal networks has changed. Organized crime has gone global, giving way to the term transnational threat. Global governance has failed to keep pace with economic globalization.

### ***Penetration into State Mechanism and Institutions***

One of the most serious negative effects of transnational threat is its penetration into the state mechanism and institutions. The effect is most pronounced in weak and developing countries with fragile socio-economic infrastructure and the weak rule of law. However, developed countries are not also immune to the negative effects of transnational threats. The reason being, transnational threats over the years can corrosively affect the state mechanism of developed countries too. “Transnational threat penetration of states is deepening, leading to co-option in a few cases and further weakening of governance in many others. The apparent growing nexus in some states among Transnational Organized Crime groups and elements of government—including intelligence services—and high-level business figures represent a significant threat to economic growth and democratic institutions” (US NSC Report 2010).

Transnational threat lives and operates on the collaboration of state apparatus and mechanism where or through which it runs the crimes. Thus, forming nexus with the corrupt segment of a particular government and government institutions assumes primary importance in their network and activities. “Transnational threat networks insinuate themselves into the political process in a variety of ways. This is often accomplished

through direct bribery; setting up shadow economies; infiltrating financial and security sectors through coercion or corruption; and positioning themselves as alternate providers of governance, security, services, and livelihoods” (US NSC Report 2010).

“Transnational threats systematically damage the economic, social, and political development of the subjected country or countries” (BIPSS 2010). Penetration of transnational threat in government machinery and institutions is done through a gradual process. Their initial target remains administrative organs, law enforcing and intelligence agencies, and the judiciary. Once they penetrate and gain a foothold in the above government system of any state, they gradually expand. Involving more and more institutions, individuals, and systems they tend to establish an alternative authority within the legitimate government machinery. Even over the years, they intrude into the political system of states, turning them to be kingmakers. This way, in the long term, they corrosively damage the democratic institutions and governance system of a country. Bureau of International Narcotics Matters (BINM) in a report says, “it is difficult to have a functioning democratic system when drug cartels have the means to buy protection, political support or votes at every level of government and society” (BINM 1994). Events in Somalia, Afghanistan, or few South American countries can be cited as an example of this trend.

### ***Growth of Corruption and Corrupt Infrastructure***

“Corruption is considered the most powerful promoter of Transnational Organized Crime where organized crime groups are involved in corrupting certain government officials such as the security forces, as well as the judiciary” (Ahmed 2017). Transnational Organized Crime networks promote a culture of crime and corruption in the government and society. Organized criminal in- ►

► terests possess a universal tendency to corrupt political institutions and undermine democratic accountability in states in which they operate. Many researchers have shown a strong correlation between transnational threat and corruption. As both transnational threat and corruption are secretive in norms, their convergence is phenomenal. The poor economic stature of the government officials in the least developed or developing countries further accelerate the breeding of corruption by transnational threat cartels. Mond Tullis in his research stated, “In systems where a member of the legislature or judiciary, earning only a modest income, can easily gain the equivalent of some 20 months’ salary from a trafficker by making one “favorable” decision, the dangers of corruption are obvious” (Tullis 1995).

In fact, without corruption, Transnational Organized Crime groups cannot sustain their criminal business or crimes. Planning, conduct, and running of such a pervasive and huge network of criminal activities are not possible without intimidating a segment of government and society into corruption. “It is difficult to keep a continuing criminal enterprise profitable and survive over the long term unless there is a means to protect it from law enforcement, which ultimately learns of its existence. For example, border crossings need to be ensured, locations of illicit activity ‘protected’, police or customs officials paid off, illicit funds delivered and deposited, court cases “fixed,” stolen property bought and sold, and politicians persuaded not to interfere” (UNODC, Doha Declaration 2018). These are examples of the kinds of corrupt activity needed by organized criminal groups to remain in illicit business and engage in ongoing criminal activity without interruption. Therefore, initially, transnational threat recruits individuals from the corrupt segment through bribing. They face no difficulty to do so due to their huge illegal financial power. At the initial stage, they mostly penetrate amongst the low-level employees, although the opportunity for

top brasses is not missed if available.

On recruitment of individuals from various segments of the government and the society, they gradually form a nexus involving them. Top officials, political and business figures are also integrated at this stage. Communication and collaborative network amongst these corrupt individuals and a corrupt segment of the government institutions are also patronized and organized by Transnational Organized Crime Groups. This nexus overtime is extended across the states to foster a regional or global network. Thus, a corrupt infrastructure is developed within and between the states. “With the development of corrupted infrastructure, they gradually accumulate authority in various organs and institutions. At this stage, they adopt coercion and power game besides bribing to bring any individual or segment on corrupted terms. Corruption supports the ongoing existence of organized crime because corrupt public officials protect organized criminal groups from law enforcement and disruption” (Rose & Palikfa 2016).

And in this manner corruption gets institutionalized in various organs and institutions of a country where transnational threat operates. Once institutionalized, corruption does not remain confined within the domain of transnational threat only. It multiplies and proliferates in other sectors and departments. Corruption becomes a cultural phenomenon in society and country in the long run.

### *The threat to National Economy*

“Transnational crime ring activities weaken economies and financial systems and undermine democracy” (Voronin 2000). It deprives a state of its legitimate revenues and duties through smuggling. Human trafficking drains a substantial amount of foreign remittance a country is due to its human resources. Through money laundering, bulk money goes out of the country damaging the ►►

▶ national economic strength.

Transnational threat tends to damage financial systems through subversion, exploitation, and distortion of legitimate markets and economic activities. The legal business of a country is challenged multidimensionally by the illegal and criminal business networks of transnational threats. “Business firms and systems are being put at a competitive disadvantage by transnational threat and corruption, particularly in emerging markets where many perceive that rule of law is less reliable. The World Bank estimates about \$1 trillion is spent each year to bribe public officials, causing an array of economic distortions and damage to legitimate economic activity” (US NSC Report 2010).

Transnational threat creates economic disparity amongst the segment of the population. It injects illegal money through the corrupt and involved segment of society. Availability of illegal money increases commodity process and living costs pushing the non-involved segments into poverty and poor living standard. “Reports from Afghanistan and Bolivia suggest that the cost of foodstuff has increased as a result of greater drug cultivation, with people who are unwilling or unable to integrate into the coca or opium poppy economy facing further impoverishment” (Tullis 1995).

Transnational threat accompanied by corruption discourages foreign investment as investors face difficulties in doing business due to corrupt culture and environment. The cost of doing business also rises due to corruption and additional budgets for security purposes. “Transnational (transnational) threat activities can lead to disruption of the global supply chain, which in turn diminishes economic competitiveness and impacts the ability of industry and transportation sectors to be resilient in the face of such disruption. Further, transnational criminal organizations, leveraging their relationships with state-owned entities, industries or state-allied actors, could gain influence over key commodities markets such as gas, oil, alu-

minum, and precious metals, along with potential exploitation of the transportation sector” (US NSC Report 2010).

### *Cultural and Social Disorder*

One of the significant long term negative impacts of transnational threat is cultural and social disorder. The most common accompanying facets of transnational threat are drug abuse, crime, corruption, and the spread of illegal money in society. All these accumulate in causing serious social and cultural disorders in the long run.

Illicit drugs have a considerable impact at each step along the chain of production, distribution, and consumption. The illicit drug creates an apronged detrimental impact on society. On one hand, it spreads the trends of drug abuse amongst the youths and involves a segment of the society in drug smuggling and business on the other. Of these menaces, most mentioning it damages the strength of the youth segment of the population. It derails them from the enlightened values of life; dis-integrates them from the family and societies. “The country study on Thailand attributes increasing use of heroin and psychotropic substances to urbanization, rapid cultural change and a breakdown in family cohesion” (Renard & Singhanetra 1993).

In a country or society where transnational threat penetrates deeply in various organs, crime, corruption, illegal money etc., become the norm of that society in the long run. Drug abuse is also interlinked with other crimes. “A review of the relevant literature indicates a strong probability that drug addicts tend to be deeply involved in criminal activities, with daily users of drugs showing a significantly higher rate of criminality than non-drug users” (Tullis 1991). Human trafficking puts women, unemployed youths, and children to be vulnerable to exploitation. Corruption, illegal money, competition for control of criminal business lead to anarchy and social disorder. ▶

► As a whole, transnational threats and their related criminal facets and trends damage the societal and cultural values and ways of life. Crime, corruption, and illegal means override the positive trends of life. In the long run, such trends destabilize the social and cultural equilibrium of a country or region. Peru, Chili, Venezuela of South America or for that matter Thailand, Myanmar, Laos, and Afghanistan of Asia can be cited as examples of such socio-cultural decay caused by transnational threat mainly drug cartels.

### *Crime-Terror-Insurgency Nexus*

One of the most dangerous trends accompanying transnational threat is the growth of a crime-terror-insurgency nexus. Terrorists and insurgents are increasingly turning to the transnational threats to generate funding and acquire logistical support to carry out their violent acts. Terrorists and insurgents have substantial armed power but lack a regular and pervasive system of financial support. On the contrary, Transnational Organized Crime groups have a large financial power of permanent nature but lack armed power in comparison to terrorists and insurgents. Thus, in most of the world, they forged a strong nexus in a complementary role to compensate for each-others lacking and shortfalls.

Examples of such nexus and collaboration are many. "Hezbollah has been active in Latin America since the 1980s when it began working with drug cartels to raise funds for operations and the purchase of arms" (Levitt 2016). "The government of Burma over 30 years has been engaged in a struggle with irredentist (rebel) groups that are financed substantially by the drug trade" (National Research Council 1999). Involvement in the drug trade by the Taliban and the Revolutionary Armed Forces of Colombia (FARC) is a well-established fact. "90 percent of opium produced in the Triangle comes from territory controlled by the Shan State Army - an insurgent group ostensibly waging war to secure rights for the Shan minority

from the Burmese majority" (Behera 2017).

Many say the crime-terror-insurgent nexus is opportunistic but bears the potential to gain permanency. Whatever its may nature be, this nexus and collaboration have greater implications for any state. One of the principal means of counter-insurgency or counter-terrorism is starving them of financial support. Financial support provided to insurgency or terrorists by the transnational threat cartels adds to their protraction and survivability for a long time. Thus transnational threat acts as a catalyst to the solvability of both insurgents and terrorists, both of which are a grave threat to states.

### *A Threat to National Security*

The transnational threat was in vogue from time immemorial. However, "within the last decade, these crimes have gone from being considered a problem limited to certain countries or regions to become one of the basic factors when defining threats to the national security in general and democratic governance in particular" (Godson & Olson 1995). Nevertheless, before we ascertain how transnational threat assumes to be a threat to national security, we need to take a relook at the changing perception of security in the post-cold war era. The demise of the cold war and events in its aftermath brought about a paradigm change in the security perception. The collapse of the Soviet Union has shown the world that a powerful nation can be dissolved from ideological and political bankruptcy without fighting any war. The disintegration of Yugoslavia and events in the Balkans proved that an internal fraction of the population could cause the breakup of a modern state. Turning of Somalia and Afghanistan into failed states, for example, has projected that fragile politico-socio-economic condition can risk the existence of a state itself. Such events and many others established the fact that the security of a state cannot be restricted to the threats from across the border. Rather a state's existence can be dissolved due to the corrosive effect of ideo-►

- ▶ logical or political failure, intra-state conflicts, and fragile politico-socio-economic infrastructure, and so on. Thus, a threat to national security cannot be confined within the scope of external aggression only. Instead, any tension, conflict, or precarious politico-socio-economic fault lines can turn into a grave threat to national security.

Under such context, growing trends of transnational threat in recent era have turned to be a major threat for national security as it has long term and deeply damaging effect on the politico-socio-economic infrastructure of a nation. “Transnational threats systematically damage the economic, social, and political development of the subjected country or countries” (BIPSS 2010). With the expansion of their network and nexus, transnational threats build alliances with corrupt segments in all important national spheres. This may include political leaders, financial institutions, law enforcement organizations, foreign intelligence, security agencies and segment of a vulnerable population, ethnic groups and many more. “transnational threat penetration of governments exacerbates corruption and undermining governance, the rule of law, judicial systems, free press, democratic institution-building, and transparency” (NSC Reports to White House 2010). Nexus forged, mostly in underdeveloped and developed countries, amongst TOC groups and elements of government pose serious threats to economic growth and democratic institutions. Through evasion of legal taxes, money laundering, accumulation of black money transnational threats can destabilize the economy of the small and weak countries. They can destabilize the social equilibrium through the spreading of drug abuse and drug business as drugs accompany crime, corruption, and social disorder. Transnational threats can antagonize the people in border areas with financial bribing to acquire support for their illegal business. They may foster a strong complementary unity with insurgents, non-state actors, and terrorist groups providing them finan-

cial and logistic support. And when the question of state sovereignty and national security is in question, the transnational threat will undoubtedly be in the insurgent’s or terrorist’s side. The reason being their motivation for financial gain is much stronger than the stake of the state they belong to. This way, over the time, the transnational threat can corrosively damage a country to turn into a failed state destroying its politico-socio-economic infrastructure. Thus it assumes to be a serious threat to national security.

### *The Threat to International Security*

Transnational threats threaten international security in many ways, both directly and indirectly. Trafficking of arms and ammunition is the most serious crime that ensures the availability of arms to insurgents, terrorists, and in conflict-prone areas of the world. Availability of arms in the conflict-prone areas of the world escalates conflict and violence. In today’s globalized and interconnected world, escalation of any conflict bears the potentials to destabilize regional and global security. The reason being in many cases, escalation of conflict tends to draw down the regional or global geostrategic factors and actors in the affair to threaten the peace and security at regional or global levels.

Global terrorism is the most common global threat in this era. Today state armies are more involved in fighting terrorism and non-state actors than in fighting another state army. The growing nexus of cooperation between terrorism and transnational threats are a major global security concern. Such nexus and collaboration help the terrorist organizations to survive and protract with the financial and logistic support from transnational threat networks that include arms and ammunition too. One of the principal tools of counter-terrorism is isolating them from financial and logistic back up. While states are taking strict measures to starve the terrorists from financial support, transnational threats are offering them alternative sources of funding, thereby, the ▶

▶ ability to survive and operate. Thus, given that global terrorism is the prime threat to international security today, transnational threats are the principal contributors to the growth and survivability of such a global threat.

One of the serious negative impacts caused by transnational threat is the damage of the politico-socio-economic infrastructure and democratic system of a state where it penetrates. Through penetration in the government and democratic institutions, it corrosively ruins the state mechanism. In the long run, it can turn a country into a failed state. Such failed states are of serious concern for international security as these states serve as the hub of global terrorism and radicalism. Terrorists and non-state actors use this failed state's sponsorship to grow and proliferate. The world has seen such state-sponsorship for Al-Qaeda and the Taliban in Afghanistan or for that matter in many countries of Africa. The world has also seen how state-sponsored terrorism can destabilize the peace and security of the entire world following the attack on the US Twin Tower on 9/11.

## Challenges Posed by Transnational Threat on Traditional Border Management System

### *The Complexity of Law Enforcement*

Bringing transnational threats on legal terms is a critical and complex task. Complexity arises as transnational threats are borderless threats and their networks prevail in several countries. This multi-national dimension of transnational threats invites multi-pronged challenges for law enforcement against them. Offenders frequently commit crimes in territories of more than one state and try to evade law enforcement by moving between states. The traditional border management system of most countries relies on traditional state laws for law enforcement against transnational threats that often prove to be ineffective due to a lack of compatible legal platforms amongst the states. "Transnational threats are difficult to be

dealt with decisively due to varied national-level legislation and lack of transnational collaborative mechanisms" (BIPSS 2010).

"The challenges in dealing with transnational crime arise from the national orientations of laws and law enforcement. Every country has its laws and law enforcement system to deal with a crime" (Finckenaer 2000). Jurisdiction and legal procedures vary from country to country. Transnational threats, therefore, expand their network and activities across the states in such a way as to broaden their reach and make it critical for law enforcement to counter them. Because more countries they involve in conducting the crimes, more mutual consent, agreement, coordination, and cooperation are needed amongst concerned agencies of different stakeholder countries. In most cases, investigation and prosecution procedures differ across the countries, causing complexities in legal enforcement.

There are problems with standardization too. Some countries have specialized jurisdiction units for legal procedures against organized crimes, whereas others follow common legal procedures. Jurisdiction on high-level seas also differs from country to country. Some countries exercise similar legal jurisdictions on both land and sea while some exclude flagged ships from the jurisdiction of state law. "Many countries have multiple agencies with enforcement authority (e.g., national police agency, customs services, local police agencies, specialized organized crime agencies), so jurisdictional issues and communication are crucial considerations" (UNODC, Doha Declaration 2018).

However, despite differences, there are working relations amongst the law enforcing agencies across the states too. The network of professional law enforcers often tends to cooperate on information and intelligence sharing, but cooperation is frequently undermined by competing national agendas and interests. ▶

► ***Technological Inferiority***

One of the significant edges that transnational threats enjoy over traditional border management systems is their technological superiority mainly in the IT sector. Unprecedented development has occurred in the IT sectors throughout the last decades. People and information are just one click away from each other today. Transnational threats were very quick and prompt to adopt these IT facilities. With their huge illegal financial power, they were faster to integrate IT facilities in their network with sophisticated modern gadgets and experts. They can now plan, coordinate, and conduct the crimes without crossing the border or physical presence.

On the contrary, traditional state border management systems were not as quick as transnational threats to adopt IT in their system. Lukewarm response of government machinery, bureaucratic process, constitutional norms, lack of resources and infrastructures in border areas, etc. led the traditional border management system in most of the countries particularly in the least and underdeveloped ones to be technologically inferior in comparison to transnational threats. Therefore, transnational threats could virtually outsmart the traditional border management system and agencies in conducting criminal activities.

IT has also offered other advantages to transnational threats where law enforcement against them has difficulty. Through virtual presence and coordination, they could evade the need for physical activities. Virtual transfer of information, instructions, and documents also made it easy for them to delete evidence. Both have made it difficult for a traditional border management system to apprehend criminals, acquire witnesses and evidence to enforce legal procedure.

***Multi-Agency Tasks***

Fighting transnational crimes is not a single agency task; rather, it is a multi-agency enterprise. Differ-

ent border management agencies have different stakes in this regard. Border security force, Customs, Passports, and Immigration, Drug and Narcotics Control Department, Police all perform their respective roles in enforcing effective border management. Thus, a well-coordinated scheme is an essential element of strong border management.

In many cases, smooth coordination amongst different agencies and organs are absent. In most of underdeveloped countries, the lack of an all-encompassing coordinating platform or framework acts as a debacle in fostering effective border management systems. Sometimes frameworks are available on pen and paper but lack harmony at the functional level.

Lack of coordination amongst various concerned agencies allows the transnational threats to exploit the opportunities. Taking advantage of cooperation and coordination lapses, they spread their criminal networks and activities.

Lack of well-knitted cooperation and coordination amongst all concerned border management agencies appears to be a more pronounced drawback of traditional border management system in recent times. As transnational threats are spreading and diversifying taking advantage of globalization and technological ascendancy, a coordinated border management system integrating all relevant agencies under central direction and platform assumed greater importance. Traditional border management in most of the countries is still trailing behind. Thus, effective border management against diversified transnational threats has been efficient successful.

***Nexus Power of Transnational Threat***

One of the basic characteristics of transnational threats is that they penetrate in and form nexus with the corrupt segment of the government and society. They form such nexus over the years and integrate members from various segments of the societies. This nexus includes important personalities and institutions of the state. Judiciary, law en- ►

► forcing and intelligence organizations, administration, and even the corrupt political figures are also integrated with their nexus gradually. The huge financial power of transnational threat cartels enables them to form such nexus in countries having fragile politico-socio-economic infrastructure.

This way, they form an alternative authority within the state that works secretly or openly in favor of transnational threats. Thus, transnational threats enjoy immunity from legal enforcement and consequences with the patronization of this nexus and alternative authority. This corrupt segment remains blind to the criminal network and activities of the transnational Organized Crime Groups.

Therefore, it becomes difficult for governments in many states to enforce strict measures against the growth and conduct of transnational threats. Even if governments launch campaigns to eradicate organized crime, information, and pattern of government campaigns reach the organized criminal gangs well ahead of time. They change and adopt alternative means. Even on apprehension, they can influence the law and judiciary in their favor by their nexus power. This nexus power of transnational threats can be so strong that they can even change the administration and government set up if some government is stubborn and adamant about eradicating them.

This nexus power of transnational threats is one of the principal factors that enable them to live and survive in many targeted countries and even against the government. Due to this strength and collaboration of the corrupt nexus, many countries remain hostage to transnational threat in taking successful countermeasures against them.

### *Global Threat vis-a-vis Local Effort*

Having networks across countries, the transnational threat is more of a regional and global threat in nature. It is very difficult for a state alone to fight and curb the transnational threats. Like global terrorism, the stakes of transnational

threats are so huge and large that it's not a one-state affair to fight the transnational threat. Transnational threats are mostly planned in one country, routed through different countries, and conducted in another country. Their network prevails in several countries and regions.

Notwithstanding the fact, most of the countries lack regional and global initiatives and forums to fight the transnational threat. Geo-political rivalry and interests most of the times, hinder the regional or global effort. Many a time narrow national interests also prevent the fostering of such collectivity. Examples are also there where the state itself sponsors the transnational threat due to informal economic benefits.

However, there are few regional and global initiatives to counter transnational threats, but those are mainly focused on developed parts of the world. Countries with fragile socio-economic infrastructure often fail to cope up with the standard and requirements of regional cooperation. For example, many of the US efforts to organize regional cooperation to counter transnational threats remained hostage to the inability of the Latin and Central American states due to weak socio-economic and cultural infrastructure there. ASEAN countries have their Collaborative Border Management system but could hardly be very effective against prevailing organized crimes due to poor domestic infrastructure and regional differences.

Thus, not only lack of regional and global initiatives, fostering a strong regional collectivity and connectivity among nations due to socio-economic and cultural differences and interests is also a substantial challenge. This non-availability and difficulty of fostering effective collectivity amongst nations is a critical challenge that states face in countering transnational threats.

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# Nepal-Bangladesh trade relations

## *Avenues for collaboration*

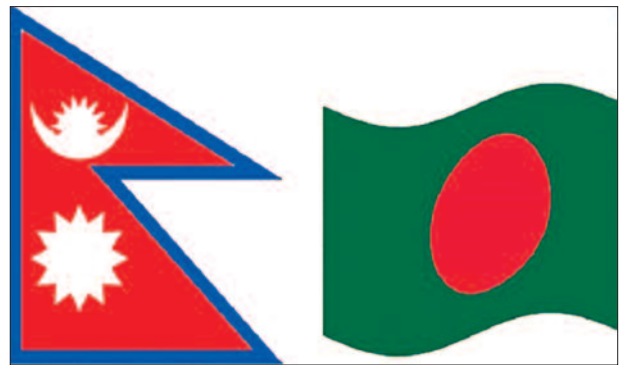
Dr. Banshidhar Mishra



Nepal-Bangladesh commercial and economic relations are growing in sentiments to our mutual benefits. There is tremendous potential for expanding and diversifying trade between the two

countries. Bilateral trade between our two countries is far below the potential. In the fiscal year 2019/20, the trade volume was around US\$ 60 million, with the trade in favor of Bangladesh. Nepal's exports to Bangladesh constitute mainly yellow lentils, oil cakes, cardamom (large), wheat, vegetable seeds, handicrafts, Pashminas etc. Imports from Bangladesh include industrial raw materials, chemicals, fabrics and textile materials, jute products, electric and electronic items.

Bilateral relations between Bangladesh and Nepal have been moving ahead since the founding of Bangladesh in 1971. The two nations are separated by the Siliguri Corridor—a small stretch of territory of the Indian state of West Bengal lying between



south-eastern Nepal and northern Bangladesh.

### Existing Mechanisms for trade and Transit

Nepal and Bangladesh have signed **four agreements in April 1976 relating to trade, transit, civil aviation and technical cooperation**. The transit agreement and the protocol to the transit agreement inked in 1976, identified six ports of calls for the movement of transport vehicles to and from Nepal. The ports of calls were Khulna-Chalna (currently Mongla Port), Chattogram Port, Banglabandha (Land port), Biral, Chilahati and Benapole. Bangladesh Government has permitted Nepal to use the facilities at Mongla Port since September 1997, following the opening of Kakarbhitta-Phulbari-Banglabandha transit route. Since then most of the products coming in Bangladesh from Nepal and exported to Nepal from Bangladesh use the Banglabandha port. ▶

► The government of Bangladesh on 10 August 2020 included a rail route in the Bangladesh-Nepal's existing transit agreement to give a much-needed boost to bilateral trade by cutting distance. The cabinet amended the existing transit protocol to add Rohonpur in Chapainawabganj district of Bangladesh as an additional transit entry and exit point connecting Biratnagar of Nepal through Singabad of West Bengal India. The Letter of exchange was formally accomplished on 22nd March 2021 during the visit of Rt. Honorable President of Nepal to the People's Republic of Bangladesh to mark the historical ceremony of Golden Jubilee of Independence of Bangladesh and Birth centenary of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman.

The initiation started in January 2010, when the



*Nepalese Foreign Minister Mr. Pradeep Gyawali called on Hon. Prime Minister Sheikh Hasina on 19 February 2020 during his official visit of Bangladesh.*

prime ministers of Bangladesh and Nepal agreed to include Rohonpur-Singabad broad gauge railway link as the additional transit route. In September same year, the addendum to the letter of intent between Bangladesh and India allowed the use of rail network as a new transit route to facilitate overland transit and tariff between Bangladesh and Nepal.

Nepal signed a letter of exchange with New Delhi in February 2016 to use Singabad to expand trade with Bangladesh. Nepal requested Dhaka to add

Rohonpur as the seventh port of call during the fourth Nepal-Bangladesh commerce secretary-level meeting in Kathmandu in June 2018 and sent a letter of exchange on 16 April 2019. The linkage became practically possible after Bangladesh replaced meter-gauge track on its side by ►



*Rt. Hon. Presidents of Bangladesh and Nepal, Abdul Hamid and Bidya Devi Bhandari, at the MoU signing ceremony at Bangabhaban on Monday, March 22, 2021.*

► broad gauge track in 2015 to connect with already existing broad gauge rail network from Biratnagar (Nepal) to Singabad (India). With this two rail routes being effective, the Rohanpur - Singhabad Railway route is more useful as it involves a distance of 217 km to reach Biratnagar of Nepal compared with the 514 km Biral - Radhikapur to Birgunj Nepal. In 2017, a company named "Best Trade" used this Rohanpur - Singabad railway route for the first time and exported 35,000 tons fertilizer to Nepal using Indian Good's Train and since then it has been used occasionally for transporting fertilizers imported from third country or from Bangladesh to Nepal.

Nepal-Bangladesh **Joint Economic Commission (JEC)** was set up in 1978 at the level of Finance Ministers. Both countries are keen on working together to further strengthening economic ties. The areas of such cooperation have been joint ventures sectors like banking, finance and insurance. Examples of joint venture initiatives are in the areas of banking (Nepal-Bangladesh Bank), finance and insurance. New initiatives are being undertaken in the field of readymade garments, leather goods, pharmaceuticals, and PVC pipes.

The first Nepal-Bangladesh **Joint Group of Customs officials** meeting was held on 12-13 December 2018 in Kathmandu. The meeting at length, discussed the issues pertaining to trade and transit facilitations such as facilitation of smooth movement of Nepal bound cargo through Banglabandha LCS, identification of trade barrier and coordinated customs procedure between two countries, export of acrylic yarn through Banglabandha LCS, easy access to Nepali agricultural products and fruits in Bangladesh market, customs cooperation and coordination among others. Following the decision of this meeting, the Government of Bangladesh has amended the existing provision to import acrylic yarn from Nepal through Banglabandha Land Customs Station

(LCS). However, Bangladesh has imposed some restrictions such as import through government approved bonded warehouses, import after chemical testing & assessment of report of the sample yarn for proper compliance, among others to import acrylic yarn from Banglabandha Land Customs Station.

**Nepal-Bangladesh Technical Committee (Commerce Joint Secretary Level)** meeting was held in Kathmandu on 22-23 October, 2019. The meeting agreed to the following:

- (i) Both countries would share the revised list of export products at the earliest for duty-free and preferential access to each-other's market;
- (ii) Bangladesh will share PTA template along with Rules of Origin modality based on SAFTA and Nepal will examine it.
- (iii) Nepal would share the revised draft of Operational Modalities of BBIN MVA within a month and Bangladesh will share its comments on it;
- (iv) Nepal would share the revised draft Agreement on Regulation of Motor Vehicle Passenger Traffic (Dhaka-Kathmandu Bus Service) with Bangladesh within a month and the latter would share its comments.
- (v) Nepal will share within a month revised draft of the following MoUs and agreements to be concluded with Bangladesh:

- MoU between Department of Food Technology and Quality Control (DFTQC) and Bangladesh Standards and Testing Institution (BSTI).
- MoU between the Department of Agriculture, Nepal and Department of Agriculture Extension, Bangladesh on Strengthening Sanitary and Phytosanitary Cooperation.
- MoU between Trading Corporation of Bangladesh and Salt Trading Cooperation Limited, Nepal.





Bangladesh Nepal 4th Commerce Secretary Level meeting in Kathmandu.

Secretary level meeting was held on 30-31 May 2018 in Kathmandu. Issues relating to additional entry-exit point (Rohanpur, Bangladesh) for Nepal in the existing transit treaty, finalizing the operational modality concerning carriage of transit cargo from Mongla and Chittagong port to Nepal's border

- ▶ ● Agreement between the Government of the People's Republic of Bangladesh and the Government of Nepal for the Regulation of Motor Vehicle Passenger Traffic between the Two Countries.
- Agreement on Operating Modalities for the Carriage of Transit/Trade Cargo between Nepal and Bangladesh.

Nepal and Bangladesh signed an **MoU on the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to taxes on income (DTA)** on 5 March 2019 in Kathmandu. This MoU would be crucial for investment expansion and further enhancing the trade relations between the two countries.

The **third Commerce Secretary level meeting** between Nepal and Bangladesh was held in Dhaka in May 2016. Similarly, the **third Meeting of Nepal-Bangladesh Additional/Joint Secretary Level Technical Committee on Trade** was held in Dhaka in January 2017.

The **fourth Nepal-Bangladesh Commerce**

point, enhancing road and rail connectivity, possibility of conducting air flight from Saidpur of Bangladesh to Biratnagar/ Bhadrapur, easing registration process for pharmaceutical products manufactured from Nepali Pharmaceutical Companies among others, were discussed during the meeting. The meeting also agreed to expedite the **Bilateral Investment Promotion and Protection Agreement (BIPPA)** between the two countries at the earliest possible. Both sides agreed to consider a trilateral agreement between Nepal, Bangladesh, and India to enhance transit through railways and inland waterways. ▶



Fifth Nepal-Bangladesh Commerce Secretary-Level Meeting, Dhaka.

► **Fifth Nepal-Bangladesh Commerce Secretary-Level Meeting** between Bangladesh and Nepal was held on 3-4 March 2020 in Dhaka. An eight-member team led by Baikuntha Aryal, secretary at the Ministry of Industry, Commerce and Supplies, participated in the two-day meeting. The meeting primarily focused on bilateral trade and investment, direct bus service, cargo movement, direct flights, possible waterways connecting the two nations and easing different customs barriers. Similarly, preliminary discussions regarding the bilateral investment promotion and protection agreement also took place at the meeting.

**The 6th Commerce Secretary Level Meeting** on Trade and Economic Cooperation was held on 8 October 2020 virtually on trade and economic cooperation decided to hold the technical committee meeting in the third week of November 2020 to finalise the list of products, text of the

PTA and rules of origin. Nepal is seeking zero tariffs on goods listed under the agreement and the removal of other duties and charges. The Nepali side also discussed the issue of yarn export. Bangladesh proposed implementing the Bangladesh, Bhutan, India, Nepal (BBIN) initiative for passenger and cargo transit between Nepal and Bangladesh. The discussion also included visa process simplification and Bangladesh raised the issue to simplify the process for investors and businessmen.

**According to the table shown following inferences can be drawn:**

First, imports from Bangladesh have been consistently increasing over the last 15 years with a peak of NRs Five Million in 2015. There after a declining trend is observed with the lowest volume of about NRs two million in 2019. Second, exports from Nepal registered the peak of NRs 4.7 mil-

### Existing Trade Situation between Nepal and Bangladesh

The bilateral trade data over the period 2004-2019 is presented below:(Value in '000 NRS)

Fiscal year	Imports from Bangladesh	Exports From Nepal	Difference: Export - Import
2004/05	205,707.00	290,877.00	85,170.00
2005/06	104,646.00	234,323.00	129,677.00
2006/07	286,477.00	521,499.00	235,032.00
2007/08	491,211.00	4,664,363.00	4,173,152.00
2008/09	418,014.00	4,710,402.00	4,292,388.00
2009/10	764,830.00	3,373,718.00	2,608,888.00
2010/11	1,104,150.00	3,471,938.00	2,367,788.00
2011/12	1,502,817.00	2,578,080.00	1,075,263.00
2012/13	2,174,027.00	2,730,217.00	556,190.00
2013/14	1,728,648.00	2,140,486.00	+411,838.00
2014/15	2,399,768.00	703,960.00	-1,695,808.00
2015/16	5,014,049.00	1,388,496.00	-3,625,533.00
2016/17	4,052,212.00	1,020,740.00	-3,031,472.00
2017/18	4,783,283.00	1,304,790.00	-3,478,493.00
2018/19	1,999,093.00	320,610.00	-1,678,483.00

Source: Trade and Export Promotion Center, GON, 2019



lion in 2008, thereafter started a downward spiral to NRs 2.7 million but yet with a positive trade balance of NRs 556,000 in 2012. Thereafter, not only the export from Nepal to Bangladesh declined sharply but also the trade balance increasingly turned out to be negative for Nepal. Lastly the year 2021 also would not be an exception in terms of trade performance due mainly to the Covid-19 pandemic as it was in 2020.

Bangladesh exported goods worth \$38.1 million to Nepal in fiscal 2018-19, up from \$10.8 million in fiscal 2010-11, according to the data from the commerce ministry of Bangladesh. In fiscal 2018-19, Nepal's exports stood at \$9.9 million, down from \$49 million in fiscal year 2010-11.

For bilateral trade the land ports at Banglabandha (Bangladesh) and Fullbari (India) are under process of being equipped with necessary structures and facilities (customs, quarantine, etc) since transshipment is necessary at Banglabandha (Bangladesh) for Nepali trucks and at Fullbari (India) for Bangladeshi trucks. The road up to Banglabandh is being upgraded as a part of multi-national **Asian Highway** inside Bangladesh thus being favorable for multi axel heavy vehicles while 37 Km. Fulwari (India) - Kakadbhitta (Nepal) is already a four lane highway.

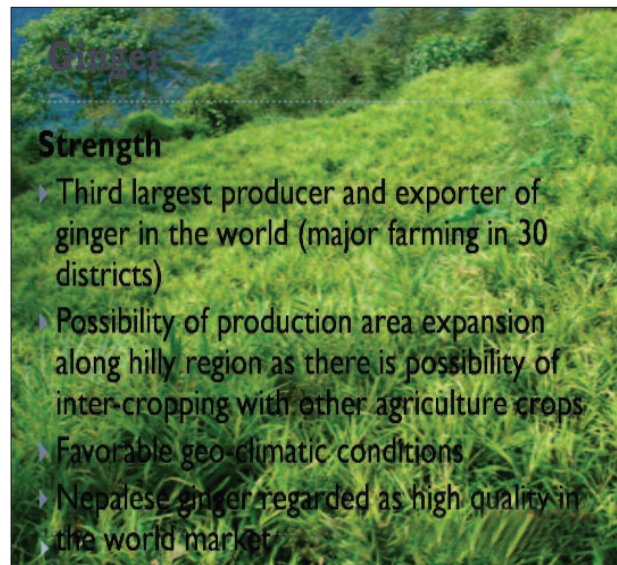
While Bangladesh could import from Nepal plenty of green vegetables and fruits of citrus variety like orange, apple, pear and peach and goods like Ginger, cardamom, cement, sand and boulders for which demand is increasing annually, Nepal could import Bangladeshi products like medicines, textiles, jute, juice, agro machineries and many others.

Both countries have in principle agreed to sign a Preferential Trade Agreement (PTA) and the draft with the list of 20 products from both sides have been shared. Also, both the countries are considering for zero customs and abolition of other du-



### Opportunities in Large Cardamom

- ▶ Main farming areas around 70 km north from Banglabandh (Bangladesh)
- ▶ Possibility of establishing processing facilities and value chain
- ▶ High Opportunities to import directly from farmers/producers
- ▶ Processed products could simultaneously be exported to India, China & Bangladesh and Asian markets



### Ginger

#### Strength

- ▶ Third largest producer and exporter of ginger in the world (major farming in 30 districts)
- ▶ Possibility of production area expansion along hilly region as there is possibility of inter-cropping with other agriculture crops
- ▶ Favorable geo-climatic conditions
- ▶ Nepalese ginger regarded as high quality in the world market



### Opportunities in Ginger

- ▶ Increasing global demand and possibility of production area expansion
- ▶ Production and processing areas fall in 40 to 80 km distance from Bangladesh
- ▶ Potentiality of establishing value chains and processing units
- ▶ Due to richness in oil and oleoresin, high potential for value addition
- ▶ Rising demand in Ayurvedic medicines and other uses

**Tea**

**Strengths**

- ▶ Special and unique geography and climate suitable for tea cultivation
- ▶ Strong and functional farmer cooperatives, possibilities of establishing processing units for export
- ▶ Most of large tea estates produce organic tea
- ▶ National Tea Policy already in place, Supportive policy of the Government

**Opportunities**

- ▶ Major tea gardens in Nepal are situated at the distance of 40 to 80 km from Bangladesh
- ▶ Possibilities of establishing processing units for export
- ▶ Scope of production area expansion
- ▶ Increasing global demand for Nepalese tea
- ▶ Organically certified areas are expanding
- ▶ Attractive price for organic tea in the global market
- ▶ Scope for product diversification and brand value in the world markets

**Coffee**

- ▶ Coffee cultivation is in 27 districts and it is being expanded to 40 districts of Nepal
- ▶ Nepal Produces mainly organic Coffee
- ▶ High Demand in Europe, America and Japan
- ▶ Nepali Coffee awarded as the Best Gourmet Coffee of 2016, *Produit Gourmet*
- ▶ Winner of '4-Gourmet'- Award in Paris 2017 organized by the Agency for the Valorization of Agriculture products (AVPA). 24 countries participated

**Knotted Carpet**

**Strengths**

- ▶ Nepal's top export product
- ▶ Strong brand image in international market
- ▶ Customized production and no restriction on

**Opportunities**

- ▶ Import for local market in Bangladesh and re-exporting
- ▶ Preferential market access as an LDC

**Himalayan Apple, Oranges and other fruits**

**Strengths**

- ▶ High quality, organic Himalayan products
- ▶ favorable geographic and climatic conditions for apple and orange cultivation

**Opportunities**

- ▶ Scope for product diversification and brand value
- ▶ High scope of production area expansion
- ▶ Organically certified areas are expanding

**Medicinal and Aromatic Plants (MAPs)**

**Strengths**

- ▶ There are huge variety of MAPs found in Nepal
- ▶ Organic and unique, as most of them are collected from wild
- ▶ Scope for mass cultivation in the specified areas as per demand
- ▶ Most of the species are endemic to the Himalayan region
- ▶ Well documented sector, with large number of studies done on potentials as well as benefits in all stages of the value chain

**Lentils**

- ▶ Nepal became the world's fifth largest producer of lentils in 2014
- ▶ According to the Food and Agriculture Organization (FAO) of the United Nations, Nepal produced 226,830 tones of lentils in 2014 to take the fifth place behind Canada, India, Australia and Turkey.
- ▶ The country accounts for nearly 4.64 percent of the world's total output of lentils. In South Asia, Nepal's share comes to 16 percent.
- ▶ The common variety grown in Nepal is 'masoor'. It has a brown skin and is orange inside.
- ▶ Meanwhile, the area under lentil cultivation increased 0.28 percent to 205,939 hectares. Lentils are produced in all the districts in the country except Manang and Mustang.

ties and charges (ODC) under the PTA. Review of the documents are ongoing at both ends and, hopefully, a practically feasible mutual understanding will be reached soon. Also, both coun-▶

- ▶ tries should attempt to benefit from the SAFTA framework of SAARC. It is imperative for both Bangladesh and Nepal to finalize the Preferential Trade Agreement (PTA) as soon as possible to maximize the benefits emanating from PTA.

Both countries have been recommended by UN to graduate from LDC by 2026. Thereafter, it won't be possible to continue PTA rather both countries will have to move to a Free Trade Agreement (FTA) Regime after the graduation in 2026. The FTA will demand that trade between the nations have to be free of customs and other fees and charges, which eventually will reduce the export competitiveness, which will be the price to pay for graduating from LDC.

### Nepal's Major Exports

- ▶ Large Cardamoms: The largest producer in the World
- ▶ Ginger: Third largest producer in the World
- ▶ Tea/Coffee: The world award winner in quality 2016/17
- ▶ Lentils: Fifth largest producer in the World
- ▶ Medicinal and Aromatic Plants (MAPs), blessed by nature
- ▶ Himalayan Apple, Oranges and other fruits
- ▶ Chyangra Pashmina
- ▶ Knotted Carpet, one of the largest export of Nepal

### Areas in Nepal suitable for investors?

There are many areas suitable and attractive to invest in Nepal. There is huge labor force, sufficient hydroelectricity available and industrial atmosphere has been created, so investors from Bangladesh can make Nepal their destination. Government of Nepal organized "Nepal Investment Summit 2019" on March 29 -30 in Kath-

mandu with the main objective to project Nepal as a favorable investment destination. The summit unveiled potential opportunities for investment in various sectors in Nepal including Hydro power, Solar power, Tourism, Infrastructure, Industry, Transport, Agriculture and Information and Communication Technology. Nepal has in place a special Investment Promotion Board, chaired by the Prime Minister to attract foreign investments across sectors. So, potential investors can also get the best out this great opportunity that Nepal offers through its Board. Besides the Federal Government Provincial Government especially Province no.1 the eastern province closest to Bangladesh, is proactive in welcoming Foreign Direct Investment in various sectors including domestic and local projects thus encouraging for Bangladesh. Nepal being directly connected with two big markets India and China, This is high time for the Investors of Bangladesh to opt for investments in its' dearer and nearer country Nepal.

### Visa Issues

Nepal issues multiple entry free of cost transit visa for one month to Bangladeshis at land port, Airport and Diplomatic missions while the same reciprocity from Bangladesh to Nepali at Banglabandha land port is yet to be operational.

India, however, offers only a Single Entry Transit Visa for Bangladeshis to pass through Indian Territory to reach Nepal by land route. If a Bangladeshi obtains a Single Entry Transit visa his/her already existing Multiple Entry Multi Year Indian Visa (allows to travel Nepal or abroad by Air only) automatically becomes void. It is understandable that just for the sake of crossing few kilometers of Indian Territory, no any Bangladeshi citizen would like to take unnecessary hassle emanating from cancelation of Multi Year Multiple Entry Visa to India. ▶

- ▶ This has been an impediment for Bangladeshi citizens to freely travel to Nepal through Land Ports and, indeed, a huge barrier for the promotion of Regional and National tourism between Bangladesh and Nepal.

Once the Bangladesh, India, Nepal (BBIN) Cargo and Passenger Motor vehicle Protocols as a part of BBIN Motor Vehicle Agreement (MVA) is signed by tri-nations, the direct uninterrupted motor vehicle movement of goods carrier vehicles and passengers between major cities of Nepal and Bangladesh including Chittagong and Mongla Port will be materialized.

### Conclusion

Despite having tremendous potentials for trade, investment and joint economic collaboration between the two countries, the lack of proper connectivity, insufficient infrastructures at the border points, lack of proper initiatives of the private sectors, presence of non-tariff barriers etc. are impediments to realize the potentials.

Trade is an area of concern for both countries, Nepali goods can find access to the Bangladeshi market and Nepal would allow Bangladeshi exports in abundance if tariff and non-tariff (ODC: other duties and charges) barriers are removed as agreed in 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> commerce secretary level meetings and conclude the PTA between these two neighbors.

The two have done well in joint-ventures set up of Nepal-Bangladesh Bank Limited. The IFIC Bank (Bangladesh) has 40.91 percent shares, and it is one of the biggest FDIs from Bangladesh in Nepal. While the progress is slow, the two economies hold the potential to grow cooperation in years to come.

Exchange of goods and services between two nations on a comparative advantage of each nation

greatly contributes to economic dynamism of both the nations, and thereby, contributes to economic growth.

Both sides have agreed to rationalize tariff and remove non-tariff barriers to ease and enhance bilateral trade for mutual benefit.

Both sides have agreed to consider a trilateral agreement between Nepal, Bangladesh, and India to enhance transit through railways and inland waterways.

Even though the economic logic in strengthening trade and transit relations between Nepal and Bangladesh is clear enough, little has happened so far other than policy concessions that seem out of touch with ground reality.

Nevertheless, there exist a huge potential for bilateral trade between the two resource rich nations. Therefore, Nepal and Bangladesh clearly now need to work to bring India fully on board in helping to smoothen the implementation of signed and agreed protocols as well as to develop new trade and transit routes. In this, sector-specific trade policies are necessary components if both countries are to truly pursue significant and increased bilateral trade.

Business community of both countries should be encouraged for organizing a Single Country Trade Fair every year in Kathmandu and Dhaka. This will have a positive impact on the trade enhancement. Nepalese business persons should be encouraged to take advantage of the huge market of Bangladesh, having about 165 million consumers near to its border and Bangladesh should complement with increased volume of trade.

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**Dr. Banshidhar Mishra**, *Ambassador of Nepal to the People's Republic of Bangladesh. Earlier the Ambassador was the State Minister and Member of Parliament of Nepal.*



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# “Rishilpi” a special Bangladeshi-Italian rural community advancement project in Satkhira

Enrico Nunziata



There are many humanitarian initiatives in Bangladesh for the assistance of vulnerable people and all have their own value in bringing hope and trying to leave no one behind.

Among them, there is a very special one, an Italian - Bangladeshi initiative, which since more than 40 years is supporting thousands of children and people with special needs, in its rehabilitation centres, empowering thousands of women by giving them job opportunities and involving in its workshop many people with different abilities, offering education to disadvantaged children and in particular to young girls, avoiding them the tough destiny of an early marriage, and implementing many other valuable activities to serve people in need independently of their belief, ethnicity or social condition.

It is “Progetto Uomo - Rishilpi International ONLUS - For Rural Community Advancement” based in the district of Satkhira. Rishilpi started

its mission in Bangladesh in 1977 as Rishilpi Development Project and it was renamed as “Progetto Uomo Rishilpi International ONLUS” in 2013. The name Rishilpi is a combination of the words “Rishi” , outcaste and “Shilpi”, artist/craftsman. Everything has started upon the initiative of two Italian philanthropists who are in Bangladesh since early 70s soon after the Liberation War: Mr. Vincenzo Falcone, Enzo, and Mrs. Graziella Melano, Laura. Enzo and his wife Laura established this organization bearing the philosophy : “Feed the hungry , heal the sick, clothe the naked and shelter the homeless”.

They are the example of a perfect integration of Italian citizens in Bangladesh and after so many years of working here they have recently obtained the Bangladeshi citizenship for which they are particularly proud. The President of the Rishilpi , Mrs. Monica Tosi, with a previous long professional experience in business and administration, is managing and supervising the work of the organization, with same love and extreme dedication and professionalism of the founders of the project, raising funds and taking care of the relations with institutions and donor community, in Italy and both at local and international level. However the key actors and makers of the success of the whole project are the Bangladeshi staff members (271 people) of ▶



▶ Rishilpi actually leading the organization, in addition to its founders and the President, with a responsible sense of ownership and with one objective : helping their own community and families.

Now Rishilpi Onlus mission is not simply guaranteeing a sustainable livelihood for the rural community in the area of Satkhira, becoming for that a role model of self-employment also for other organizations, but also building an educated community and equipping children, including those with different abilities, to be future leaders.



At present almost 20,000 people directly and indirectly get benefits through its different projects which include: Rishilpi International Handicrafts, Rishilpi Health and Rehabilitation, Rishilpi Education Program, Rishilpi Education



PROGETTO UOMO RISHILPI INTERNATIONAL ONLUS  
ASSASUMI CBR CENTER

Staffs Information

Sl. No.	Name of Staffs	Qualification	Remarks
01	Shankar Kumar Das	B.A. B.Com. M.A. (Economics)	Manager
02	Shobhana Kumar Bhowmik	B.A. B.Com. M.A. (Economics)	Manager
03	Leena Khatun	B.A. B.Com. M.A. (Economics)	Manager
04	Kusuma Ghosh	B.A. B.Com. M.A. (Economics)	Manager
05	Mahmuda Sultan	B.A. B.Com. M.A. (Economics)	Manager

Target-2021

Sl. No.	Items	Target	Actual	Remarks
01	Production	20	20	
02	Revenue	200	200	
03	Number of workers	200	200	
04	Number of production	200	200	
05	Number of production	200	200	
06	Number of production	200	200	
07	Number of production	200	200	
08	Number of production	200	200	
09	Number of production	200	200	
10	Number of production	200	200	
11	Number of production	200	200	

Support Program, Water Treatment Plant and Rishilpi Bakery.

Rishilpi International Handicrafts has created job opportunities for 5000 producers, including many women and many people with different abilities, and 115 people working as office employees under Rishilpi Handicrafts.



This project works for ensuring the sustainable income of the poor and disadvantaged

communities bearing cultural heritage of Bangladesh in their different products exported in Europe, USA, Japan and Australia, and sold in Bangladesh as well. Each product is a unique piece reporting in the label the name and signature of the producer.





► The Rishilpi Health and Rehabilitation Centre in Satkhira and in the other towns (Tala, Keshabpur, Khulna, Assasuni, Kalaroa) are worthy to be visited, to witness the valuable, precious everyday work made with passion, patience and resilience by motivated specialized staff of doctors, physiotherapists, volunteers. Heroes of our times, which prefer to work close to their commu-



nities instead of searching better life opportunities abroad or in the main cities of the Country. They are serving the poor and most vulnerable people with disabilities since 1980. In last 7 years from 2014 till 2020 around 6000 children/people with disabilities have been integrated in the community . Thanks to the rehabilitation , children with disabilities have access to education, mothers receive training of basic physiotherapy and



postural technique for their children, people know more on disabilities.

Moreover the workshop of Rishilpi centre builds assistive devices for children and people with disabilities. Maternal and child care in targeted areas are improved by providing care at home level to mothers and children. The specialization of the Rehabilitation centres includes orthopedic and neurology physiotherapy unit, pediatric physiotherapy in patient ward (IPW), occupational Therapy Unit with an Autism Corner , sensory room, appropriate paper based technology (produced in Rishilpi by recycling paper). In addition to that , there are other units : special education unit, social welfare unit, general health service, workshop unit and hostel unit.

Every year around 2000 students are enrolled in Rishilpi Education Program at the main centre in Satkhira (kindergarten, primary, secondary). The main objective of the education program is to create opportunities for the children of disadvantaged communities as education is an agent of transformation and development of their own communities. ►





► The Rishilpi Community Education Program is working to improve the quality of education for children come from Rishi, Kaura, Munda, Jele and some poor Muslim families; to ensure that the children of the poorest villages are educated up to class five because in many cases they lag behind in health, education, nutrition etc.. and that is why they stop studying before passing class five; with Rishilpi special school, education from six classes to ten classes is ensured.

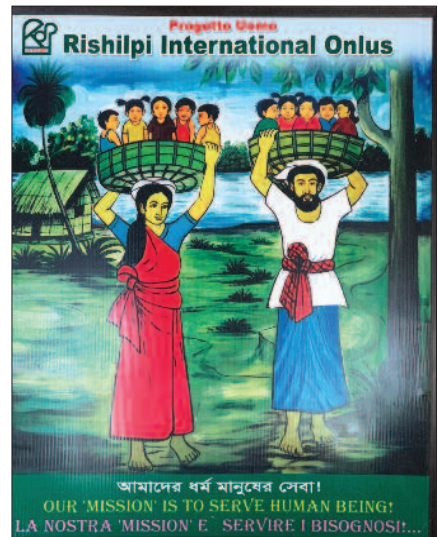
To help these children to study and to provide to their needs Rishilpi Education Support Program provides sponsors , mainly kind hearted people of Italy, who through a child sponsorship support Rishilpi to provide educational materials. Water Treatment Plant is one of the most important component of Rishilpi program to ensure safe drinking water for the entire campus in Stakhira and subsequently to expand for the beneficiaries who are living in surrounding areas of Rishilpi. The plant has been donated by a group of Rishilpi's Italian friends through Rishilpi Onlus-Italy in 2010. Water lab is being worked for testing the quality of water of the plant along with the tube wells and Arsenic Iron Removal Plant in the



community for ensuring the purity of drinking water.

The Rishilpi Bakery produces delicious biscuits, bread and cakes not only for the people of the Centre in Satkhira but above all for the distribution in the local market , by giving jobs to many people.

The description of its interventions and achievements cannot really depict the sense of community , altruism and self-denial which ones can only understand by sharing some time with the staff of Rishilpi and visiting its activities on the field. It is in the smiles of the assisted children and their parents that one can really get the meaning of the job and the mission of all professional people working for Rishilpi. This makes Rishilpi a true flagship in the Italian-Bangladeshi long friendly relationships and that is due to the passion and abnegation of all Rishilpi Community.



**Enrico Nunziata**, a career diplomat and an awardee of title of knight of the Italian Republic is Ambassador of Italy in Dhaka.

**Part-IV**

# Political Economy of Reinventing Bangladesh Railway

*Transition from Colonial System to the Sovereign, Economic, Technological, and Digital Solution*

**Dr. Jamaluddin Ahmed**



## Roadmap for Railway Technology

### Capacity augmentation.....

Between now and 2031, the passenger and freight traffic in Bangladesh is expected to grow by another 40% and 37% respectively.

However, while both passenger and freight traffic has shown phenomenal growth, the inputs have not grown at this rate. Though railways have evolved from steam to diesel to electric traction, and also adopted a uniform gauge policy (broad gauge), technological intervention has been rather slow and also out of pace with the global standard of development.

Technology intervention.....is needed in the following key areas- maximum speed and average speeds of passenger trains, average speeds of

freight trains and load carrying capacity of wagons. The above three key enablers will need further technology intervention in many associated disciplines, including, high speed trains with tilting technology, higher axle load wagons, tracks suitable for higher axle load, better payload to tare weight ratio, signalling and communication systems for safe operation, use of energy efficient systems, other passenger amenities and facilities. One of the following options can be adopted in increasing the throughput of passenger and freight trains: Developing an exclusive freight network, connecting major centres of business, originating points of minerals, ores and ports.

This will ease out the freight traffic from the existing mixed lines. Augment the existing network for higher speed, which must be used for passenger traffic and freight feeder service only. Alternative to the above could be developing exclusive high speed passenger network connecting state capitals, existing major railway junctions, centres of business, and airports. In this scenario, existing network must be used predominantly for freight traffic and for passenger feeder services. ➤



► **Passenger traffic has to be dealt under the three categories mentioned as .....**

(i) Long distance travel involving a night or part of a night requiring sleeper facilities; (ii) Medium distance involving four to five hours of travel (example business travel); (iii) Short distance commuting, involving less than two hours of travel and including suburban and urban transport like metro rail.

**For passenger capacity increment under category ....**

(i) and (ii) above, following options are possible: Dedicated high-speed passenger corridor, similar to ICE, TGV and 1 SHINKANSEN connecting state capitals, national capital, important business centres and towns; Feeder services to this high-speed network using the existing rail connectivity or by way of incremental additions; Raising the maximum operating speed to 350 km/h and establish an average speed of at least 300 km/h. Please note that many countries, including China, have already developed this capability; Make the passenger fare different for long distance and medium distance travel to discourage medium distance travellers from using long distance trains. Such variable fare can be linked with availability of

seats. During lean periods, if there is excess capacity in long distance travel, the same can be given at a subsidised rate. As a natural consequence of the above two aspects, a stream of associated technologies are to be developed. Metro network is already in place for quite some time now, but high-speed operation is totally a new area.

### Implementation Strategy

#### Key Enabling Technologies.....

Out of various requirements discussed in the foregoing chapters, only key enabling technologies are discussed in this chapter, along with the strategy for development, with suggested time frame. These include, high speed operation, heavy haul operation, signalling and traffic management system, and passenger amenities.

#### High Speed Operation.....

The high speed operation is highly multi-disciplinary, involving various technologies involving track, rolling stock, signalling, safety and security. In some select areas, technology may have to be acquired from developed railways initially. Making a pilot high speed operation in the medium term will provide opportunity to understand and assimilate various complex issues of high speed. ►

POWER TRAIN TECHNOLOGIES			
Name of Technology	Description	Remarks	Investment Required
MPFI	Multipoint fuel injection	Technology used for 3 wheelers, passenger cars, LCVs and HCVs	Investment required for indigenous development
GDI	Gasoline Direct Injection	Technology used for Passenger cars, LCVs and HCVs	Investment required for indigenous development
CRDI	Common Rail Direct Injection	Technology used for 3 wheelers, passenger cars, LCVs and HCVs	Technology can be imported
Engine Downsizing and De-rating	Reducing size of the engine for achieving same power or reducing power from same size	Technology used for SUVs and LCVs	Nil
Hybridization	Incorporation of electric battery and motor to supplement the IC Engine	Used in some luxury cars and being introduced for small cars, SUVs	Investment required to produce low cost electronics and batteries
Advanced Combustion	Advanced combustion concepts like HCCI, PCCI etc.	Technology used for SUVs and LCVs	Investment required for indigenous development
Variable Compression, Variable Valve Lift	Variable concepts in engines for higher fuel efficiency and performance	Used in some luxury cars and being introduced for small cars, SUVs	Technology can be imported
High Performance Engine Materials	Advanced materials like plastics, ceramics, high strength alloys etc.	Used in some luxury cars and being introduced for SUVs	Investment required for indigenous development
Combustion Modelling	Computational Fluid Dynamics (CFD) and chemical kinetic modelling	Used for all types of engine development	Investment required for development of software and workstation facilities
Powertrain Electronics and Sensors	Used for advanced engines like CRDI, GDI etc.	Used for all advanced engines	Technology can be imported

FREIGHT OPERATION TECHNOLOGIES	
Associated Technology	Availability of Resources Indigenously
1. Wagons with higher payload to tare weight ratio (above 3.5)	Outside support is needed. Involves use of special composite materials
2. Use of higher axle load (25t, 30t and 35t) progressively	Development may be possible indigenously. As the impact is on track and bridges, it would attract huge additional investments.
3. Heavy Haul with RDP (Radio Controlled Distributed Power)	Indigenously possible to develop. Investment needed for long loops, dedicated freight lines and other logistics. Already limited versions of indigenous designs are in commercial operation.
4. Heavy Haul with WDP (Wired Distributed Power)	Indigenously possible to develop. Investment needed for long loops, dedicated freight lines and other logistics.
5. IT enabled freight operations	Indigenously possible to develop. Though started during eighties, real benefits are yet to be derived from this project, as the implementation was stalled.
<b>Technologies related to Freight Operation</b>	Wagons with higher payload to tare ratio, Use of higher axle load, Use of long trains with radio controlled distributed power (RDP), Use of long trains with wired distributed power (WDP) and IT enabled freight operations management service with end-to-end wagon tracking system.
<b>Technologies related to Signalling and Traffic</b>	European railways were the pioneers in evolving a standard for automation in this area – ETCS (European Train Control System) – which involves provisioning in both trackside and on-board the vehicle. Depending upon this provisioning and safety levels, there evolved ETCS levels 0, 1, 2 and 3. ETCS level 3, together with GSM-R evolves ERTMS, which also has levels 1, 2 and 3 depending upon the nature of track to vehicle communication (24)
<b>Technologies related to safety</b>	<b>Coaches with better crashworthiness:</b> Design of coaches with better crash worthiness, which is an area that would need outside support, at least in the form of consultancy[25]. <b>Accidents at level crossings:</b> Highest numbers of fatalities over IR occur due to accidents at unmanned level crossings. In ERTMS (The European Railway Traffic management) territories, interlocking of level crossing would be taken care of as part of the basic requirement. <b>Accidents due to extremism and vandalism:</b> This is a requirement which is very difficult to implement. Suitable technology must be evolved to detect suspicious movements and extremist activities on the track. On the rolling stock side also, suitable surveillance mechanism must evolve to detect carrying of explosives and banned items. This could possibly be developed indigenously with available resources. <b>Accidents due to fire:</b> Better designs to avoid fire and also detection and extinguishing technologies need to be developed.
<b>Technologies related to security</b> - Development of on-board CCTV surveillance - real-time monitoring is possible by a police squad in a nominated area in every train, for instance in the guard's van. In such a case, there is no need for police to patrol the entire train in case of vestibule trains. <b>Development of systems that can be enabled by passengers in case of any security issues like terrorism and banditry attacks. New station designs for better surveillance. New station designs for evacuation of public in the event of disasters caused by terrorists; New yard designs, which prevent access to unauthorised persons and/or facilitate remote monitoring and policing;</b>	Systems (intended for installation at railway stations) for <b>detection of explosives, inflammables, etc.</b> Ability of railway coaches to detect the on-board presence of <b>explosives, inflammables, etc.</b> Ability of rolling stock to detect if <b>explosives are planted on tracks</b> or if damage has been inflicted to track by terrorists and transmit <b>warning message</b> to control centres. Ability of railway infrastructure/inspection cars/trains to effectively detect and issue <b>advance warning if explosives</b> are planted on tracks or if damage has been inflicted to <b>track by terrorists</b> ; Coach design should facilitate efficient evacuation of passengers in event of an <b>explosion/disaster</b> . Securing transportation of strategic importance e.g. <b>defence supplies, emergency relief consignments, etc. from terrorist strikes</b> ; Efficient system for <b>security scanning of freight</b> being received/ booked for movement. Systems for <b>detecting suspicious activities</b> in yards (i.e. planting of explosives on coaches, wagons, etc.) and Tamper-proof design of <b>critical railway systems</b> (e.g. rolling stock, signalling, relays, SCADA, etc.)

The success will depend upon the synergy with which various departments of railways (electrical, mechanical, civil, signal, etc.) will work and involve proper industries. The role of RDSO is also very important in synergising these agencies.

### Heavy Haul Operation.....

Heavy haul operation is a method to drastically improve the throughput with minimal input. A

long train is operated using a single crew by distributing the locomotives along the train and controlled through radio signal. Australia, China, USA and South Africa are the countries operating heavy haul trains; with trains of length up to 7.3 km being in operation. This technology can be indigenously developed and implemented in potential routes, especially in dedicated freight lines, in the medium-term. This scheme with lim- ➤

▶ TECHNOLOGIES FOR HIGH SPEED OPERATION

Design, development, testing and manufacturing of high power, low loss, low weight, under-slung transformer, preferably with aluminium tank, of above 6-6.5MW power suitable for high frequency switching 4Q converter with harmonic control, hotel load and auxiliary windings.

Propulsion converter with IGBT (or any other device which is likely to be released in future) giving highest standards of power quality and near unity power factor at the pantograph.

Traction motors with fully suspended arrangement, both synchronous and asynchronous type of capacity of about 1.5MW

Torque transmission arrangement for with standing speed above 400 km/h, with fully suspended traction motors.

High speed bogie and suspension arrangement

Capability to model Panto-Catenary interaction at high speeds, especially with multiple locomotives attached in a train as a 'train-set' and evolve the most optimum configuration to prevent oscillations and current collection problems at high speed.

Data communication network between the locomotives and carriages in a moving train and also with wayside.

Onboard infotainment. With mobile devices taking prominent role in all aspects of life presently, making free (or chargeable) high speed internet (wireless) in all the trains would be needed. To start with, Indian Railways has planned to provide free Wi-Fi to the select Shatabdi trains. Indian railways have also announced a plan to install wifi at 400 railway stations in partnership with Google.

Self diagnostics to enunciate unsafe conditions on real time to central server (real time remote diagnostics), thereby to the succeeding trains, like excessive vibrations, unsafe track conditions, fire etc. as a proactive step.

State of the art maintenance techniques and plant and machinery for preventive, conditioned based and breakdown maintenance of track, rolling stock, signalling and telecommunication assets.

Composite materials to keep weight under control

High speed pantographs

HIGH SPEED TECHNOLOGIES UNDER CONSIDERATION

The areas considered for discussion with regards to the status and availability of technology, include High Speed Operation, Heavy Haul, Signaling and Traffic Management System, Safety-related, Security-related, and Passenger Comfort-related

	Associated Technology	Availability of Resources Indigenously
1	Capability of simulation and model studies	Will need outside consultancy
2	High speed test tracks of considerable length and ability to simulate various conditions	Design will need outside consultancy
3	Capability to design and simulate high speed bogies and test the prototypes in test tracks especially from the point of view of track forces, vibration and derailment coefficient	Will need outside consultancy
4	Suspension technology for high speed operation bringing in passenger comfort in acceptable levels	Will need outside support
5	Tilting technology (or similar technologies employing Mechatronics) for increased passenger comfort and reducing accidents	Will need outside support
6	Lighter and stronger composite materials similar to the one needed for aircrafts	Partially available. Can be fulfilled with technology tie-up between industries in India and abroad.
7	Acoustic design and noise reduction technologies	Will need outside support
8	Design to take care of crash and impact and test for crashworthiness	Will need outside consultancy
9	Capability to design and develop aerodynamic designs	May need outside consultancy. Can also be tried out indigenously.
10	Brake system suitable for high speed	Can be obtained/developed through the existing brake system suppliers like Knorr-Bremse, Faiveley, Wabco etc.
11	Inter-vehicular couplers (mechanical, pneumatic, power and signalling)	Will need outside support
12	Door closing mechanisms	Can be developed, or availed through present players in the field.

ited scope is already indigenously developed and is in commercial use. This can be extended for developing heavy haul trains at par with developed countries.

**Signaling and Traffic Management System.....**

Implementation of systems like ERTMS (European Rail Traffic Management System) is inevitable for safe and efficient running of trains at high speed. Being in vogue in developed countries, adequate literature and knowledge can be acquired for its indigenous development. Suitable

industrial partners are to be brought in for successful development and implementation.

**Predictive Maintenance Technologies.....**

Predictive maintenance technologies involve identification of a possible defect (which can cause huge loss or accident) in advance. This can consist of various technologies like Wheel impact load detector installed by the side of the track, to identify the defective wheels of a train and send message to the maintenance depot instantly to isolate such defective coaches or wagons. Acoustic ▶▶

HIGH SPEED TECHNOLOGIES: TECHNOLOGIES UNDER CONSIDERATION		
	Associated Technology	Availability of Resources Indigenously
13	Platform surveillance system	Can be developed indigenously
14	Design, development, testing and manufacturing of high power, low loss, low weight, under-slung transformer, preferably with aluminium tank, of above 6-6.5 MW power suitable for high frequency switching 4Q converter with harmonic control, hotel load and auxiliary windings	Basic design may need outside consultancy. It can also be purchased from existing international suppliers.
15	Propulsion converter with IGBT (or any other type of device which is likely to be released in future) giving highest standards of power quality and near unity power factor at the pantograph	In the recent past, this item has been developed indigenously and is in commercial operation. Industries will be able to upgrade it to 6-6.5MW levels. It can also be purchased from existing international suppliers.
16	Traction motors with fully suspended arrangement, both synchronous and asynchronous type of capacity of about 1.5 MW torque transmission arrangement for withstanding above 400 km/h	Basic design would need outside consultancy. It can also be purchased from existing international suppliers.
17	High speed pantographs	Basic design will need outside consultancy. It can also be purchased from existing international suppliers.
18	High speed bogie and suspension arrangement	Basic design would need outside consultancy. It can also be purchased from existing international suppliers.
19	Capability to model pantograph-Catenary interaction at high speeds, especially with multiple locomotives attached in a train as a 'train set' and evolve the most optimum configuration to prevent oscillations and current collection problems at high speed.	Will need outside consultancy
20	Data communication network between the locomotives in a train, between locomotives and carriages as well as to way side stations.	Can be indigenously developed
21	Train wide internet connectivity (wireless broadband) and infotainment	Can be indigenously developed
22	Development of high speed Over Head Equipment (OHE)	Will need outside support
23	ERTMS (European Traffic Management System) implementation	Can be indigenously developed but would take more time. Initially can be availed from international players operating in India.
24	Development of high power fuel efficient diesel engines and diesel locomotives for tracks which are non-electrified	Will need outside support
25	Development of high speed tracks	Will need outside support
26	Development of state of the art facilities and skill for maintenance of track, rolling stock and other fixed installations for high speed.	Will need outside support.

based bearing health check. Infrared based axle detection, remote diagnostic of locomotives and coaches, real time monitoring of bridges and structures, etc. All these can be developed indigenously and deployed in the short-term.

**Blue Sky Research.....**

Moving platforms at railway stations, wherein, there is no need to stop the trains for getting in and getting out. This is something similar to Arial fuelling of aircrafts or a cab getting attached to a cable car. Hotline maintenance of traction overhead equipment at 25 kV without the need for taking power block and traffic blocks. Though hotline maintenance techniques are available in normal high voltage transmission lines, this is unheard of in railways due to lower creep distances and railway track below. If hot line maintenance technique is adopted, there is no need to switch off the power.

**Current State of Bangladesh Railway.....**

Districts Route and Stations Bangladesh railway has 2877.10 KM (2015) network connecting 44 districts out of 64 districts. Explore the possibilities of reopening the closed Branch Connec-

tion/Lines. Carry out a study to reassess the need of opening a new Railway connection considering the changed economic activities in the different locations of Bangladesh. We should also emphasize the 100 Special Economic Zones contemplating foreign and Local Companies Investment participation in Export Led Industrialization, where the Railway Infrastructure can be cost effective and provide reliable service on a long-term basis. In particular, with the expansion and automation of Land and Sea-ports and ever-increasing Export and Imports, Railway Cargos can play a role for smooth and reliable support services. Bangladesh Railway System started its journey centering Kolkata as the capital city of British India and thus developed the Railway System placing emphasis on Kolkata. From 1912 onwards, the British rulers relocated capital city to Delhi so Kolkata lost its gravity from the political, economic and administrative context. It shifted to Delhi, Bombay and other commercially important areas. The attention of the British rulers shifted to those areas after Muslim led Sepoy Revolution of 1856-57. During the British period, the Railway system was developed in East Bengal (cur- ▶▶

▶ rently Bangladesh) and it had connectivity with West Bengal (currently a part of India), Assam, Tripura, Meghalaya and the rest of the Northeast of India. Many of these states enjoyed Rail connectivity until they were closed after 1947. Only a few of them are getting reopened. For inter-country trade, these routes should be re-examined for possible connectivity. Compared to Passenger and Material Carrying Vehicles, Railroads are safer in terms of Road Accidents. Lord Dalhousie came to India in 1848 to serve as Governor General of India. He annexed many states like Satara, Sambhalgarh, Nagpur and Jhansi under 'Doctrine of Lapse'. He introduced railways in India and the first railway line from Mumbai to Thane was opened in 1853. In the same year, Calcutta and Agra were connected by Telegraph.

#### **Building BR's Future : Three Growth Scenarios.....**

Now that we have obtained a restructured capital base of BR and have to be transformed its accounts into a company format, it is possible to simulate different growth scenarios to assess the financial feasibility of different strategies. We have reported the kind of traffic growth that can be seen to be possible, with three possible investment scenarios to be worked out. These different revenue and investment projections can now be brought together within the framework of a consistent financial model that can be projected into the future. The model framework allows us to assess the different financing strategies implied by the different scenarios projected. Each investment scenario implies the raising of corresponding resources and their servicing over the time from revenues. We examine the feasibility of three different scenarios.

Among many ways to evaluate viability of an ongoing concern, we have chosen a broad definition of 'viability' to be used in project financing. The rationale behind that is the immediate investment need of railways that it needs to finance.

Hence, in this article suggests the need of net present value (NPV) technique to be used to evaluate different financial scenarios. The NPV of cash-flows before financing of existing liabilities is computed for each scenario. After deducting the NPV of existing liabilities (which is the book value of liabilities in the base year) the amount, in present value terms, is utilized to finance investments (capital expenditure plus working capital). The difference between the NPV of cash-flows after financing of existing liabilities and the NPV of investment flows is the figure which reflects the first stage of viability or unviability of the business. A negative figure implies a funding gap which needs to be financed. A non-negative NPV would mean that the business is viable – in the sense that the future cash-flows generated by the business can support the existing liabilities and the projected investments. The advantage in using this approach lies in the fact that the viability is established without any reference to financing. If the NPV analysis indicates viability the financing could be tailor-made to suit the cash-flow profile. Any number of financing strategies can then be used to do the actual financing. Therefore, in this article, suggest a 'viable' scenario implies that it is workable. The viability is evaluated on the following three ascending stages. (a) Given the assumptions embedded in the simulation, is Net Present Value (NPV) of the enterprise (BR) positive or negative; (b) Is there any liquidity risk for a lender is cash-flow sufficiently strong to meet current liabilities. (c) Will it provide sufficient comfort to government who is giving large amount of subsidies, directly or indirectly, and implicit guarantees on market borrowing.

Choice of the discount rate determines the viability of the NPV method. The discount rate used for the financial model is the weighted average cost of capital for IR in line with our assumptions of cost of capital IR is to pay on government and market borrowings, and of general rate of increase ▶▶

► in prices. In building the financial model of IR, it was decided to use nominal prices for future projections but report the results in today's money. All the results have been converted into money of today where the effect of inflation is removed from nominal forecast numbers. The rationale behind this working is to give decision-makers a sense of what the BR would cost, and the benefits it would bring over the fifteen-year horizon in today's prices.

#### Grid search....

In building a model of BR there are three critical parameters – government support, capital expenditure and provision for unfunded liabilities i.e. pensions. For building scenarios some estimates of these parameters were taken, but before arriving at these estimates the Expert Group had extensive discussions—at times energetic ones—on these issues and it is our endeavor to encapsulate these discussions and quantify these in a grid search.

Railways have clearly defined user groups and user charges. But politicisation of setting of user charges and spreading of services has led to delinking of user charges with the cost of providing the services and inefficient investments. During the restructuring process, as railways finances are put back in order it will neither be politically feasible to increase user charges to reflect economic cost immediately, nor would the customers be willing to pay. Moreover, a substantial increase in user charges will lead to substitution of transportation modes which may not be optimal for the economy as a whole. Keeping this in view the Expert Group has proposed a gradual tariff rebalancing exercise (see chapter 3). Keeping such difficulties in mind and central government budget constraints the Expert Group decided that the government should provide a part of financing gap as preference capital at the same cost as the government provides assistance to railways today. The Expert Group decided that 40 per cent of

the financing gap would be an appropriate support for the following reasons. First, it would show the commitment of the government to the railways and second, it would help in keeping the debt service under control. The latter is essential if railways are to achieve turn-around from a loss making organisation into a profit-making one.

For the other two critical parameters namely, capital expenditure and devolvement of pension liability, a grid search was carried out. For capital expenditure two alternatives were suggested—first, capital expenditure with unremunerative investments and second, without the unremunerative investments. The unremunerative investments include money spent on new lines, gauge conversion, Metropolitan Transport Projects and a proportion of investments on doubling of lines and Railway Electrification. In the latest BR budget. Assuming that investments under these heads will remain at the same level over the model horizon, as much as 23 per cent of total investments under Business as Usual Low Growth scenario (total investments Rs 129,000 crore) and 18 per cent of total investments under Business as Usual Medium Growth scenario (total investments Rs 161,000 crore) could get crowded out by the outlays on unremunerative projects. Under the Strategic High Growth Scenario it is assumed that unremunerative investments, if any, will be provided for from the central or state government budget.

For devolvement of pension liability three alternatives can be chosen. The numbers adopted here therefore on the safe side in estimating likely future liabilities under proposed projection. Of the three alternatives the first alternative was zero devolvement i.e. the railways continue to meet pension liability as they do now from their internal accrual. A diametrically opposite view to this was that 60 per cent of all pension liability devolves on the government in perpetuity. The reason put forward is that in the next 30-40 years ►

- ▶ approximately 60 per cent of the pension out go will be due to unfunded but contingent liability of the present organisation and this is the maximum amount government can be asked to provide for. The third alternative is between these two extremes, and the number chosen is 20 per cent of the pension liability.

Given the reality of overall fiscal situation of the country, we discarded the scenarios where capital expenditure included unremunerative investments in all the scenarios. Under the Business as Usual Low Growth scenario, the alternative with zero devolvement of pension was taken for further analysis, the reason being that under the Business as Usual case government cannot shy a way from his contingent liability. In the Business as Usual Medium Growth case 60 percent of pension devolvement on government was chosen as this is the only alternative which has positive NPV, implying that the project with generous government support and large cuts in capital expenditure can be viable. In the Strategic High Growth case 20 per cent of pension devolvement on government was taken as this alternative is not too burdensome on the exchequer and yet the model remains viable. BR should examine the three scenarios: (i) Business as Usual-Low Growth, (ii) Business as Usual-Medium Growth, and (iii) Strategic High Growth under plausible assumptions regarding revenue streams, operating costs and capital expenditure.

To summarize.....Bangladesh was never an independent country before the surrender of Pakistani Occupation on 16 December 1971. At the end of the rule of European companies and the British for 190 years and then so-called Pakistan for 23 years the Railway infrastructures, were only constructed in the Colonial interest of Economic, Commercial, Administrative and Militarily not for the integrated development for the general people of Bengal who suffered deprivation, discrimination and exploitation to the region in every aspect developmental issue including the

Railway Network. As can be seen, technology progress in the railways sector has been rather stagnant, in the last decade. The pace of growth inputs has not been able to keep up with the increase in freight and passenger traffic. The running route km and track km, the maximum and average speeds of both passenger and freight trains, signalling and communication system, safety measures for operation, maximum axle loads, payload to tare ratio, etc. have almost remained static. In order to catch up with global standards, a leap forward is needed over the next two decades.

A totally new mechanism of technology management and monitoring is required for implementing the identified technologies within the proposed time frame. Unfortunately, the structure of the Bangladesh Railways is not conducive for fast technology development. The positive aspect, nonetheless, is the availability of all these technologies for purchase at a price. In the years to come, only an indigenous development approach is deemed sustainable. For successful development, one has to blend indigenous technology along with acquired global technology in select critical areas. This will speed up the implementation and milestones can be maintained. Key enabling technologies like high speed passenger operation, heavy haul operation, higher axle load, lighter wagons, crashworthy coaches, communication-based train operation, and driver less operation, among others, will pave the way for developing many associated technologies. This will boost the rail industry in Bangladesh, and at some point in time, the country can reach at par with developed countries. The success of the identified technologies and development milestones will become realistic if adequate funds are made available in time and the work entrusted to appropriate agencies, both government and industry and monitored properly. To translate the desired goal of current government, make Bangladesh to graduate as middle income, devel-▶

► STRATEGIES FOR TECHNOLOGY DEVELOPMENT

	Requirement	Indigenous	Foreign Direct/ Collaboration	Strategy	Time Frame
1	High Speed Operation	-	Yes	<ul style="list-style-type: none"> <li>Import initially.</li> <li>Indigenous development to follow through collaboration / TOT</li> </ul>	<ul style="list-style-type: none"> <li>200 km/h : 2-5 years</li> <li>250 km/h : 4-8 years</li> <li>300 km/h : 6-10 years + 350 km/h : 8-12 years</li> </ul>
2	Heavy Haul Operation	Yes	-	<ul style="list-style-type: none"> <li>Associate with present brake system suppliers.</li> <li>Technology input through TOT/consultancy from foreign sources on select areas, if needed.</li> </ul>	<ul style="list-style-type: none"> <li>10,000t trains: 2-5 years</li> <li>20,000t trains: 3-7 years</li> <li>40,000t trains: 5-9 years</li> </ul>
3	Signalling and Traffic management System	Partially	Yes	<ul style="list-style-type: none"> <li>Import initially.</li> <li>Indigenous development to follow through collaboration / TOT</li> </ul>	<ul style="list-style-type: none"> <li>ERTMS coverage of Quadrilaterals and Diagonals: 100% in 3-5 years</li> <li>ERTMS coverage in all Class A and Class B routes: 100% in 4-8 years</li> <li>ERTMS coverage in all A, B, C and D class routes: 100% in 6-10 years</li> </ul>
4	<b>Passenger Amenities</b>				
4.1	Railway Stations with intermodal commuting facilities and convenience for aged and persons with disability	Yes	-	Indigenous development	1-2 years

TECHNOLOGIES REQUIRED PRIORITISATION AND MILESTONES

INFRASTRUCTURE LEVEL	Short Term 1-5 Yrs	Mid-Term 5-10 Yrs	Long-Term 10-20 Yrs
Dedicated high speed tracks on select demonstration routes	●		
Dedicated high speed tracks connecting quadrilaterals and diagonals		●	
Dedicated high speed tracks connecting all state capitals			●
Dedicated high speed tracks connecting other important business centres			●
<b>OPERATION LEVEL</b>			
High Speed Operation @ 200 km/h	●		
Heavy Haul Operation – Train Load 10,000t	●		
Signalling and Traffic Management System – ERTMS coverage in quadrilaterals and diagonals	●		
High Speed Operation @ 250 km/h		●	
High Speed Operation @ 300 km/h		●	
Heavy Haul Operation – Train Load 20,000t		●	
Heavy Haul Operation – Train Load 40,000t and above		●	
Heavy Haul Operation – Train Load 40,000t and above		●	
Signalling and Traffic Management System – ERTMS coverage in all routes		●	
High Speed Operation @ 350 km/h			●

TECHNOLOGIES REQUIRED PRIORITISATION AND MILESTONES

OTHER AREAS	Short-term 1-5 Yrs	Mid-Term 5-10 Yrs	Long-Term 10-20 Yrs
Suspension Technologies for high speed coaches including tilting technologies		●	
High speed tracks (in stages 200, 250/300, 350)		●	
Higher axle load wagons in stages of 25t, 30t, 35t		●	
Tracks suitable for higher axle loads 25t, 30t		●	
Night vision technology for driving at night		●	
Environment friendly and user friendly toilets implementation in stages		●	
Computer and GPS assisted cruise control for energy saving		●	
State of the art maintenance infrastructure and skill development for track, rolling stock and other fixed installation along with the introduction of new technologies.		●	
Tracks suitable for higher axle load 35t			●
Alternative fuel based locomotives (fuel cell)			●
Computer and GPS assisted cruise control for energy saving			●
Total driverless operation (for select high speed lines and all metros-Driver may be available as a backup protection only)			●



TECHNOLOGIES REQUIRED PRIORITISATION AND MILESTONES

OTHER AREAS	Short-term 1-5 Yrs	Mid Term 6-10 Yrs	Long Term 10-20 Yrs
High speed test track	●		
Simulation Studies of high speed trains	●		
Composite materials for coaches – lighter, stronger	●		
Crashworthiness studies, crashworthy coaches, aerodynamic designs	●		
Inter-vehicular couplers for high speed	●		
Door closing mechanism	●		
Platform and train security surveillance system	●		
High Power Traction propulsion Components (both electric and diesel electric traction)	●		
Diesel Engines working on substitute fuels (bio-diesel)	●		
High speed pantograph	●		
High speed OHE, capability to study high speed panto-OHE interaction	●		
Implementation of wireless broadband internet and infotainment/passenger information system in all important passenger trains	●		
High speed tracks (in stages 200, 250, 300, 350)	●		
Wagons with payload to tare weight ratio above 3.5	●		
Higher axle load wagons in stages of 25t, 30t, 35t	●		
Tracks suitable for higher axle loads 25t, 30t	●		
IT enabled freight operations including RFID based tracking	●		
Environment friendly and user friendly toilets implementation in stages	●		
Predictive Maintenance Technologies for track and rolling stock (Wheel Impact Load Detector, Acoustic bearing defect detection, Hot axle detection)	●		
Accident Avoidance System (Train Collision Avoidance System)	●		
State of the art maintenance infrastructure and skill development for track, rolling stock and other fixed installation along with the introduction of new technologies	●		

**Annex 3: Closed Rail Lines (1970-2003) 13 Branch lines were closed. These closed branch lines are**

<p>Habiganj-Shaistaganj, Shaistaganj-Balla, Kulaura-Shahbazzpur, Serajganj Bogra-Serajganj Ghat, Kurigram-Old Kurigram, Modukhali-Kumarkhali (BR Information Book, 2014). Most of them were closed on the basis of being considered economically unprofitable projects (Yasin, 2010).</p>	<p>Faridpur-Pukuria, Vharamara-Riota, Lalmonirhat-Moghalhat, Pachuria-Faridpur, Kalukhali-Bhatiapara ghat, Rupsa East-Bagerhat, Feni-Belonia,</p>
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In order to improve the track condition, a feasibility study for improvement and rehabilitation of branch lines of Bangladesh Railway was undertaken in 2007. The study indicated that 1009 Km of tracks needed urgent rehabilitation and 1,647 Km of tracks were in good condition, which needed only proper routine maintenance (Rail Master Plan, 2013).

**SAARC Railway corridors in Bangladesh Passes through the Country**

**Pakistan-India-Bangladesh-India**

- i. Lahore(Pakistan)-Wagah (Pakistan)-Atari (India)-Delhi (India)-Kolkata (India)-Gede/Petrapol (India)-Darshana/Benapol (Bangladesh)-Dhaka(Bangladesh)-Shahbazzpur (Bangladesh)-Maishashan (India)-Imphal (India)
- ii. Lahore(Pakistan)-Wagha (Pakistan)-Atari (India)-Delhi(India)- Kolkata(India)-Gede/Petrapol (India)-Darshana/Benapol (Bangladesh)-Dhaka(Bangladesh)-Akhaura/ Gangasagar (Bangladesh)-Agartala (India)

**India-Bangladesh**

Imphal(India)-Agartala (India)-Akhaura/Gangasagar (Bangladesh)-Chittagong Port (Bangladesh)

**Nepal-India-Bangladesh**

- i. Birgunj (Nepal)-Raxaul (India)-Singhabad (India)-Rohanpur (Bangladesh)-Mongla Port/ Chittagong Port (Bangladesh)
- ii. Biratnagar (Nepal)-Jogbani (India)-Radhikapur (India)-Birol (Bangladesh)-Khulna (Bangladesh)-Mongla Port (Bangladesh).
- iii. Bardibas (Nepal)-Inarwa (Nepal)-Jaynagar (India)-Radhikapur (India)-Birol (Bangladesh)-Khulna (Bangladesh)-Mongla Port (Bangladesh).

**Bangladesh-Bhutan**

Mongla Port/Chittagong Port (Bangladesh)-Chilahati (Bangladesh)-Haldibari (India)-Hasimara (India)-Bhutan.

**Opportunities of Bangladesh to become a land transport Hub and logistic centre in the region**

- The unique geo-graphical position of Bangladesh.
- Khulna-Mongla rail link would provide the shortest railway corridor to connect Nepal, Bhutan and North-West India.
- Proposed Padma rail link and Dhaka-Comilla chord line would provide shortest railway corridor to connect Chittagong port to West Bengal of India.
- New Akhaura-Agartala rail link and re-opening of Shahbazpur-Mohishoshan would facilitate traffic from Chittagong port to North-East India.
- Actions taken for construction of missing links and enhancement of capacity.
- All ports in the Bay of Bengal are estuarine with shallow drafts of 9m or less where as proposed Matarbari & Sonadia Deep Sea Port will have 15 m & 14m draft respectively which will allow container vessels arrival at the port with 4000 TEUs or more.
- The deepest berth in proposed deep sea port at Sonadia/Matarbari would be the key to make Bangladesh a regional transport Hub which would be the nearest deep sea port to Nepal, Bhutan and parts of India.

Bangladesh Railway Development Program-2045

Phase	Number of Projects	USDm Project Value	Comments
COMPLETED PROJECTS 2010-2015 (Existing MP)	25	513.97	
ONGOING PROJECTS 2016-2020 (Existing MP)	36	1644.23	Investment Project-29 TA projects-07 (24.81)
Phase-I: 2016-2020	76	18696.12	➤ 20 Nos gauge
Phase-II: 2021-2025	63	14946.62	➤ 39 Nos RS Related projects
Phase-III: 2026-2030	30	10744.50	
Phase-IV: 2031-2035	22	12068.53	
Phase-V: 2036-2040	12	10300.75	
Phase-VI: 2041-2045	4	1365.00	

**BR Upcoming Projects for enhancing Regional Connectivity**

- Construction of 2nd Railway-cum-road Bridge over the river Karnafuli near Kalurghat Bridge (To be financed under EDFC fund)
- Construction of Dhirasram ICD with allied works (Likely to be financed by ADB)
- Conversion of Dhaka-Chittagong corridor into DG (financed by ADB)  
Dhaka-Laksham-Comilla High speed elevated line-feasibility study going on
- Fauzderhat-Chittagong Port and Chittagong-Dohazari DG Double Line (Likely to be financed by ADB)
- Railway Connection with Matarbari – Maheshkhali Power hub and Deep Sea Port (Likely to be financed by ADB)  
Construction of Bogra-Sirajgonj DG Rail line in progress.
- Parbatipur-Ishurdi-Khulna Double line  
Upgrading of Jessore-Benepole section under proccess
- Double tracking between Joydevpur to Ishurdi (Under proess). Procurement of rolling stocks.  
Dhaka city circular elevated rail line (Feasibility study going on).

**Bangladesh Rail Upcoming Projects for enhancing Regional Connectivity**



Review of the inputs and outputs used in previous studies		
Study	Inputs	Outputs
Nash and Preston (1994)	Total cost, Staff	Train-km, Market share
Nash and Shires (1994)	Track-km Staff Total cost	Train-km, Passenger-km, Freight-tonne-km
Dum and Yu (1994)	Staff, Energy consumption, Rolling stock	Passenger-km, Freight-tonne-km
Gathon and Pestkew (1995)	Engines and railcars, Staff, Length of electrified lines	Traffic units (sum of passenger-km and freight-tonne-km)
Coell and Pechman (1999)	Staff, Rolling stock, Track-km	Passenger-km, Freight-tonne-km
Carros and Maudos (2001)	Operating cost, Labour cost, Energy, Material/external services	Passenger-km Freight-tonne-km
Looides and Tolosa (2004)	Staff, Capital cost (interest and depreciation), Energy cost	Traffic units (weighted with revenue share)
Itatano (2005)	Route length	Passenger-km, Freight-tonne-km
Growtich and Wetzal (2007)	Staff, rolling stock, Track-km, Operating expenditure	Train-km Passenger-km, Freight-tonne-km
Oriessen et al. (2006)	Staff, Track-km, Rolling st.	Passenger-km, Freight-tonne-km
Wetzal (2008)	Staff, rolling stock, Network length	Passenger-km, Freight-tonne-km
Carros et al. (2010)	Staff, rolling stock (passenger + freight), Network length	Passenger-km, Freight-tonne-km
Mitsutani and Uranishi (2010)	Sum of labour, energy and capital costs, Total route km, % of electrified line	Total train-km (passenger + freight)

Source: Steer Davies Gleave summary of Markert et al (2013), Benchmarking of train operating firms – a transaction cost efficiency analysis, Table 1

oping and developed country in bigger picture by the year 2041 the country needs to emphasis on the economics of Railway Transportation. This task begins with remaking of BR will need government decision transform through, first: creation of Railway Regulation Authority; second: Corporatization of BR; Formation of Limited

Company; third: separation of BR operation and form new company with PPP facilitating to go IPO. To perform all the functions addressed in the article we need to prepare a financial statement of BR following commercial principals adhering to Generally Accepted Accounting Principles as adopted by the Institute of Char- ➤

► Literature review – key determinants of utilisation and efficiency of rail

Year	Author, Title	Significant exogenous factors
2012	Laabsch, Sanner: "The Impact of Vertical Separation on the Success of the Railways"	GDP/capita
		Share of rail as % of public expenditure
2013	Mizutani, Uranshi: "Does Vertical Separation Reduce Cost?"	Rail network length
2008	Wetzell: European Railway Deregulation: "The influence of regulatory and environmental conditions on efficiency"	Population density
		Rail network density
2008	Pvlyuk: "Efficiency analysis of European countries railways"	GDP/capita
		Population density
2007	Vassallo, Fagan: "Nature or nurture: why do railroads carry greater freight share in the United States than in Europe?"	Length of coastline
2006	Wardman: "Demand for rail travel and the effects of external factors"	GDP
		Cost of travel by road
2001	Friebel, Ivaldi, Vibes: Railway deregulation: A European efficiency comparison	Country size measured by network length and density
1994	Oum and Yu: "Economic efficiency of railways and implications for public policy"	Rail network density

Source: Steer Davies Gleave analysis

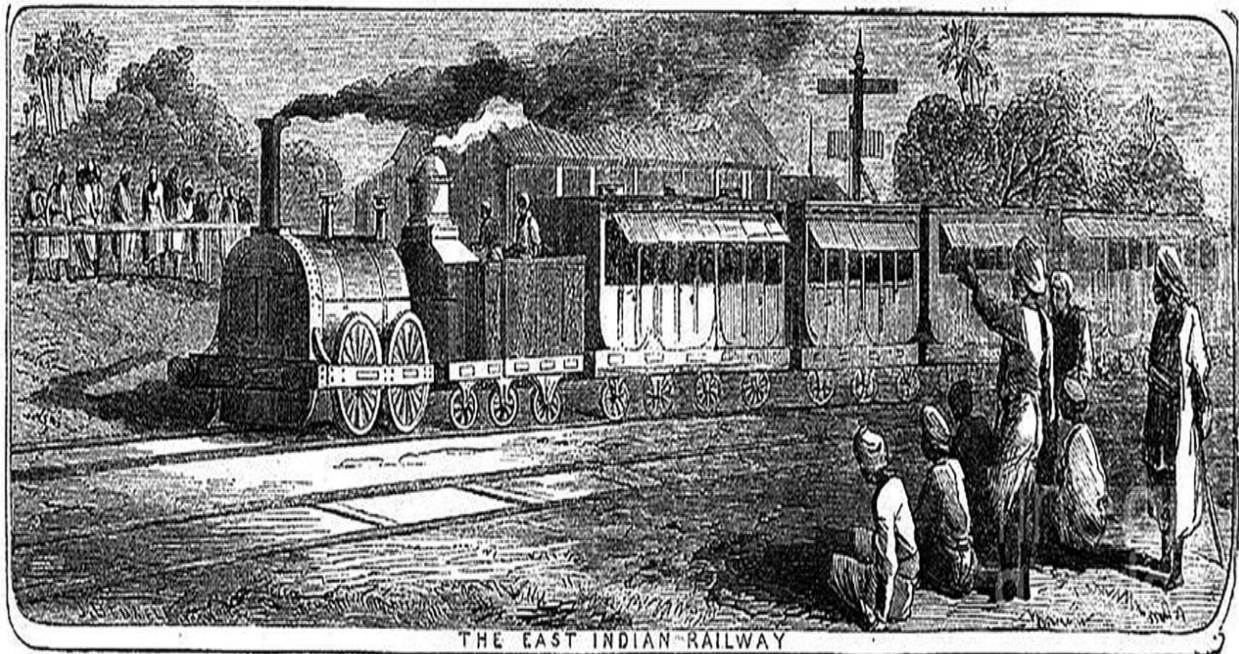
**New Zealand Rail Restructuring - from 1982**

Government Department	Corporation	New Zealand Rail Ltd.	Private Ownership
<b>Control Structure</b>			
Strong political focus	Reduced political focus and control	Limited liability company Commercial directors No overt political control	Accountable to private sector shareholder Limited liability company not subject to political control
Social and economic role Ministerial control	Crown Corporation : Not limited liability Quasi-private sector orientation	But Subject to SOE Act : accountability ,	Governed by normal commercial ethos
Ministerial control	Quasi-private sector orientation	Subject to intense monitoring , Not able to fully emulate private sector	Subject to standard legislation, e.g., Companies Act, Commerce Act, Fair Trading Act, Resource Management Act
<b>Competitive Environment and Industry Position</b>			
Protection from competition Licensing regulations and 150 km limit	Transport deregulation: 3 year phaseout of 150 km limits	Deregulated competitive transport industry Fully contestable market-place	n.a.
<b>Organizational Structure</b>			
Functionally organized, e.g.: Operations Engineering Sales	Organized by business group Freight Passenger including road Property Interisland	Rail freight (including ferry) with complementary passenger businesses (rail, ferry), and ferry commercial vehicles	n.a.
<b>Management Focus</b>			
Operational and technical: Engineering excellence	Restructuring: Operational efficiency, Cost cutting.	Commercial: Customer orientation, Market emphasis, and Cost containment	Full commercial mandate

The Privatisation of New Zealand Rail Part 1: Assessment of History, Markets and Data Prepared by: New Zealand Institute for the Study of Competition and Regulation Inc. 22 July 1998, revised 10 July 1999

tered Accountants of Bangladesh. There should be attempt to reopen already closed rail lines within different parts of Bangladesh considering the current economic progress of Bangladesh, the closed lines connecting with neighboring countries in the commercial interest be explored and reopened. For international connectivity with the economic corridors to turn the country into Eco-

nomie Hub of the South Asia and Trans-Asian countries, the Bangladesh Railway must get ready in terms of compatible management, corporate structure, technology, high speed, line construction, fuel efficiency, automation of passenger services, security from all sides, and capable improve maintenance and services. The leadership at the top of BR should initiate necessary step. ►►



- ▶ Government may form a multi-disciplinary task force with the contents of terms of reference. This may be done with experts from, relevant professionals, Railway Technologist, ICT expert, Infrastructure economist, Chartered Accountant, Sociologist, and Security expert at the earliest.

The first passenger railway train in eastern India (at the time under the rule of the British East India Company) steamed out of the present-day city of Howrah at 8:30 a.m. for the city of Hooghly. The trip took a total of 91 minutes. This segment of the East Indian Railway Company—ultimately known as only the East Indian Railway—covered approximately 24 miles.

The segment was officially opened about 16 months after India's first passenger train, in the service of the Great Indian Peninsular Railway, had made its inaugural run between the cities of Bombay (present-day Mumbai) and Tannah (now called Thane) in the western region of the sub-continent. The Company's first train to run between Howrah and Hooghly included three first-class and two second-class coaches as well as three trucks for third-class passengers. All of these cars had been built there in India. This was be-

cause the ship transporting the original cars from England had sunk en route to India. The train's locomotive was successfully imported to India, but only after undergoing its own unique set of challenges; due to a navigational error, the ship carrying the locomotive initially sailed to Australia instead and had to be redirected to India.

The train was filled to capacity for the inaugural trip from Howrah to Hooghly, with more than 3,000 people having applied for the honor of riding in the first passenger train to travel in eastern India. Scottish-born George Turnbull was the chief engineer responsible for the construction of the East Indian Railway Company line. His efforts on behalf of the Company and other railways in that part of the world earned him acclaim as the First Railway Engineer of India. [August 15, 2017, Asia, Today in Transportation History]

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**Jamaluddin Ahmed PhD FCA** is the General Secretary of Bangladesh Economic Association, Former member of Board of Directors of Bangladesh Bank, Former Chairman of the Board of Directors of Janata Bank Limited and Former President of the Institute of Chartered Accountants of Bangladesh.

# Changing Nature of Global Conflicts: Role of the UN Peacekeepers

Dr. A. K. Abdul Momen



Peacekeeping Operations (PKOs) are the United Nation's most visible activities and that is why it got Nobel Peace Prize. They save thousands of lives every year and are vital to the peaceful resolution of conflicts and essential force to

maintain stability in post conflict countries. As the top troops and police-contributing country, Bangladesh continues to make an enormous contribution to the United Nations Peacekeeping Operations.

Bangladeshi peacekeepers, the country's men and women in blue helmets, have been a great torchbearer of the Bangladesh brand abroad. Inspired by the Father of our Nation Bangabandhu Sheikh Mujibur Rahman's foreign policy doctrine, "Friendship to all, malice towards none," and our constitutional obligation to support peacekeeping under UN umbrella. No wonder Bangladesh has been participating in the UN peacekeeping missions since 1988. The glorious liberation war of

Bangladesh in 1971, when the nation experienced genocide, persecution, suffering, displacement, torture, and horror, also deeply motivated Bangladesh to seek global peace and work for improving the plight of the persecuted population irrespective of geographical boundaries.

Father of the nation Bangabandhu Sheikh Mujibur Rahman in his maiden UNGA speech in 1974 iterated and I quote, "Peace is an imperative for the survival of humanity. It represents the deepest aspirations of men and women throughout the world." This people-centric and value-driven approach towards global peace have been the guiding principle for our engagement with the UN Peacekeeping Operations over the last three decades.

The UN Peacekeeping operations have become more complex and diverse. The often-hybrid nature of modern peacekeeping operations involves a wide range of military and civilian activities across the conflict management spectrum, together with various institutions working in parallel in peacekeeping and peace building programs.

Armed conflicts today are mostly intra-state rather than inter-state, and peacekeepers are often called to engage a changing profile of armed/militant groups who often resort to terrorist or guerilla tactics or are interconnected with organized crime. Peacekeepers are also required to confront and neutralize groups and outfits in possession of ▶

► a new generation of weapons.

Today's conflicts have a number of drivers that are different from those of even a decade ago. Two emerging trends are increasingly impacting the conflict landscape: new technologies and sophisticated weaponry. In many respects, technology has enabled a much wider range of actors to become influential players in violent conflict, whether it is the use of social media platforms for recruitment into armed groups, dark web transfers of resources to violent actors, or the weaponization of emerging technologies.

Added to this complex scenario now is the uncertainty of the COVID-19. The pandemic is poised to cause a severe economic downturn globally, which may be most keenly felt in fragile states with lesser financial or social safeguards. Generally, economic downturns tend to generate the kinds of social unrest that often trigger violent conflicts. The Covid-19 is expected to contribute to higher risks of instability in the coming years. The nature of Peacekeeping operations has also been transformed both in terms of scale and scope. Peacekeeping Missions today are more than truce supervising operation. In fact, Peacekeeping in the present world, perform multi-dimensional activity ranging from peace enforcement, peacekeeping to peace building. Their responsibility have further expanded to include other dimensions of peace, such as establishing rule of law, protection of human rights, protection of women and children, support to political process, managing elections, reintegration and socio-economic development.

Access to local population becomes particularly relevant when considering current nature of conflicts. Generally, women constitute almost 50%



*Bangladesh Army assist civil administration in fight against coronavirus.*

of the local population. Therefore, today's peacekeepers have to be extra sensitive to women's needs and women rights.

Given these trends, with threats to peace in the world proliferating and crises growing increasingly complex, the UN peace operations need to adapt continually to make them better suited to 21st-century conflicts. Peacekeeping operations may consider several strategies to be more effective in the face of changing nature of conflicts:

First, instead of having sprawling mandates covering many issues, future missions may be entrusted with a much smaller set of tasks with clear focus and priorities.

Second, better synergies among all actors in various phases, starting from mandate setting and peace consolidation and exit strategy are the key. All stakeholders, including the UNSC, troop-contributing countries and the host countries must show adaptability and prudence in forging meaningful partnership.

Third, women and children are often the main victim of violence in conflicts particularly sexual abuse and it is often difficult for male peacekeepers to cross social and cultural boundaries required to build the trust. This is where female peacekeepers can fill the gap by providing women and children greater sense of security, foster their trust and, in the process, gather valuable infor-►►

► mation for their mission. Realizing the role of women in peacekeeping and peace building, Bangladesh spear-headed the landmark resolution UNSC 1325 on women, peace and security.

Fourth, peacekeeping operations should be designed to analyze and respond to how local, national, and regional actors form an interdependent network. The current configurations of UN peace operations are not adequately suited to these tasks, particularly those requiring analysis and engagement with the political economy of conflict and also addressing the risks of asymmetric security threats.

Fifth, Medical capacity building and resource allocation for health-related contingencies need to get strong focus in our policy discourses on peacekeeping. Preparedness to address challenges such as the one we are confronted now for example Covid, has to be embedded in future planning and mandate setting of peacekeeping missions.

Sixth, As socio-economic factors will largely dictate the future conflicts, whether it is loss of livelihood, global economic downturns caused by a pandemic, or deepening inequalities resulting from a combination of urbanization, uneven growth, and new technologies in the hands of a few, over time, the UN will need to embrace the interrelated nature of conflicts more than it does today. Peace operations should be seen as a node in a system in which change is driven by countless factors.

Bangladesh remains committed to UN Peacekeeping and makes all endeavor to ready its forces keeping in mind the changing nature of conflicts and the complexity of modern peacekeeping operations.

Apart from our leading role in peacekeeping, Bangladesh has also shown a remarkable contribution to peace building activities. Within the limited mandate, Bangladesh peacekeepers have demonstrated outstanding success in mobilizing the affected population in various nation-building activities. Our female peacekeepers have placed them as the key driving forces to reduce gender-

based violence, conflict, and confrontation, providing a sense of security, especially for women and children, mentoring female police officers in the local area, and thus empowering women in the host country and promoting social cohesion.

We are proud of the achievements of Bangladeshi blue helmets. Our peacekeepers aptly complement our peace-centric foreign policy vision. They are rendering the world a selfless service by faithfully carrying out their share of the responsibility with other partners to achieve a peaceful global order.

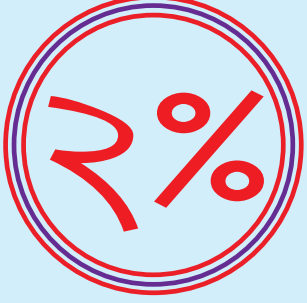
All said and done, it is important to note that UN Peacekeeping is a temporal phenomenon. To have sustainable peace and stability, it is important to create a mindset of respect and tolerance towards others irrespective of ethnicity, color, race or religion. Violence, terror and tension, war and conflicts are increasing across nations uprooting millions of people from their sweet homes and countries largely due to spread of venom of hatred and ignorance. Currently 1.1 m Rohingyas that were persecuted in their own land are being sheltered temporarily in Bangladesh. They are uprooted because of spread of venom of hatred against them for years. However, they are not the only one.

In order to have sustainable peace and stability across nations Bangladesh has been promoting a concept of “ Culture of Peace”. It promotes a mindset of respect and tolerance towards others irrespective of ethnicity, color, race and religion. If we truly can create such a mindset, we can hope to have a sustainable world of peace and stability across nations. However, such mindset cannot be created alone by government. It needs proactive support from parents, teachers, academicians, community leaders, opinion builders and activists and, more importantly, leaders of synagogues, mosques, mandirs and churches. Let us take a vow to achieve such a mindset.

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**Dr. A K Abdul Momen** is a Bangladeshi economist, diplomat, politician and the Minister of Foreign Affairs of Bangladesh.

# যতবেশি রেমিট্যান্স, ততবেশি ক্যাশ!!



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# Food Insecurity is Rising

An innovative technology based agricultural model being proposed by Public Private Partnership Authority and designed by Sino Bangla SilkRoad Company Limited to benefit the farmers and boost the economic growth of the country

**Matthew Jay Yang**



The agricultural revolution is the name given to a number of cultural transformations that initially allowed humans to change from a hunting and gathering subsistence to one of agriculture and animal domestications. Today, more than 80% of human worldwide diet is produced from less than a dozen crop species many of which were domesticated many years ago.

When we talk about Agricultural Revolution we refer to improvements in agricultural techniques. To feed the ever growing population of a country the agricultural system must adapt to various innovations and tool technologies. Good governance ensures adequate productions and surplus of food.

Scientists are in continuous pursuit of increasing food production within the limited farm land. Today's agricultural revolution is largely driven by the advances in biosciences. Modern biotechnology applications are speeded up by plant cross breeding process with respect to conventional plant breeding approaches as well as land management. Today hybrid and genetically modified ►

► crops are grown in fields at a commercial, global scale.

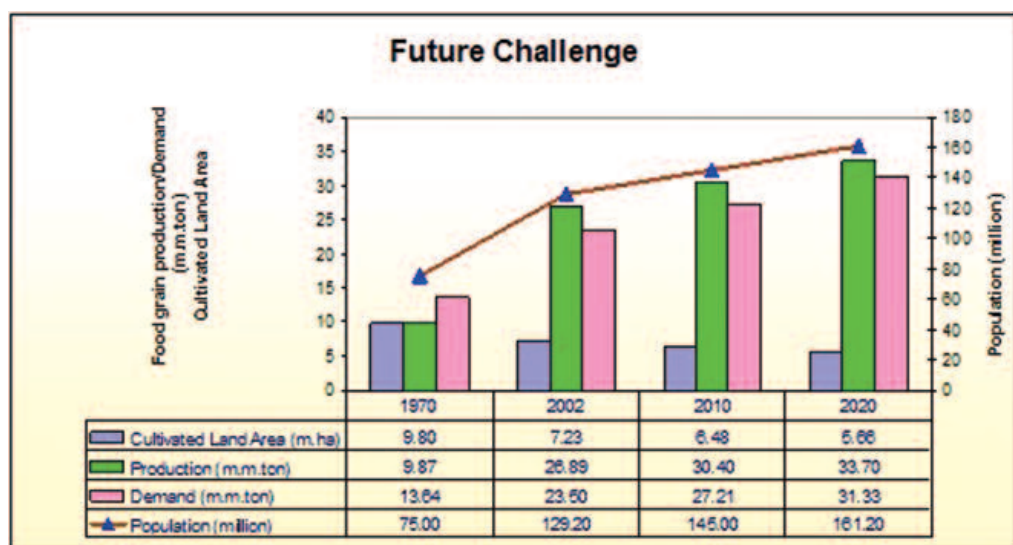
In a country like Bangladesh with high density of population requires the dependence on plant and animal domestication entailing a number of other environmental adaptations including deforestation, irrigation, and the allocation of land for specific crop cultivation. Overpopulation along with decrease of the land-to-human ratio has made the need for food security of topmost priority of the nation. About 32 percent of people in this country still live below the poverty line and do not have sufficient access to affordable food. It is worth mentioning that of recent years Bangladesh has made tremendous improvement in ensuring the food availability but in spite of it, the shocking reality is that even with the sufficient food production, 26 percent of people are still chronically food insecure.

Bangladesh is still predominantly an agrarian society. Being self sufficient in food production is the biggest challenge for the country. With limited agricultural land, proper utilization of the farm land is crucial to adequate food production. Being able to produce large quantities of farm crops alone is not the solutions to food security. Food storage and food preservations techniques are just as important.

Despite making tremendous success in food production, Bangladesh is still experiencing limited access to sufficient food. Although 60 percent of people living in the rural areas are directly or indirectly en-

gaged with agriculture, land distribution inequalities led to people's disproportionate access to food. Small farmers, those owning 0.5-1.49 acres of land, are the major population of Bangladesh, who consist of 44.6 percent of the farming communities. These small farmers mainly have access to cereals but other basic food items are not sufficiently available for them. Poverty is another factor that makes access to food difficult and ultimately creates food insecurity. Bangladesh has made significant progress in reducing poverty rates and improved its extreme poverty situation with the passage of time but changes were not significant.

Since 2002 food production has actually been keeping slightly ahead of demand but that does not keep room for errors. The down side is that the size of arable land has decreased due to many factors like removing of the topsoil for brick making, river erosion, housing and industrial development, etc. On the upside the country has been spared from major natural calamities, like flooding, storms, earthquakes, etc. If statistics should be taken for its scientific values, Bangladesh should not be complacent of its good fortune. With inadequate food reserve should the country be struck with any sudden misfortune in the disruption of food production the country will face an insurmountable challenge in resolving the crisis.



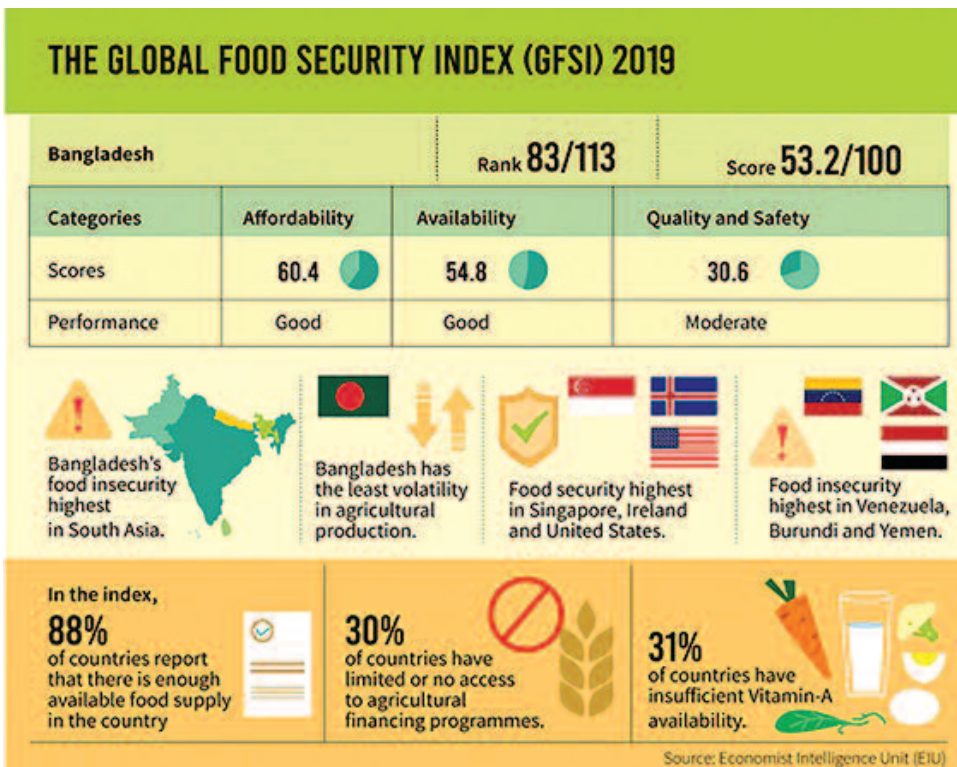
► As the graph above shows food production has almost kept pace with the size of the population, however should the food production reach its point of diminishing returns there will be catastrophic consequences.

In normal times Bangladesh’s food prices fluctuates tremendously. This volatility is an indication of the country’s unpredictable food production and food distribution management. Although the Consumer Price Index (CPI) for the past five years has been pretty stable with the acceptable inflationary rate of around 5.9%, but the food inflation rate fluctuates as high as 20% for grains and 150% for farm produce. The unpredictable food prices are a constant threat to the majority of the population who are on a fixed income bracket. Bangladesh ranked 83<sup>rd</sup>, is the lowest among South Asian countries in the Global Security Index - 2019.

security is directly dependent on the agricultural sector and climate change influences the agriculture rigorously. The changing patterns of hazards and natural calamities such as irregular and untimely rainfalls, uneven temperature fluctuation, salinity rise, ill-timed drought, river erosion, and floods have made Bangladesh more vulnerable to food insecurity in the coming days. An expected estimation counts that climate change may cause up to US\$26 billion loss to Bangladesh’s agricultural sectors during the 2005- 2050. This loss may be more in rice production and leads to 3.9 percent reduction in rice production per year. The effect of climate change is harsher with regard to the majority of farmers, since they belong to the smallholding farming community.

Besides, the increasing conversion rate of agricultural land to nonagricultural land could have adverse impacts on food security. One-third of the

agricultural land was lost in the last 30 years due to the unplanned urbanization in this country. This losing pace does not seem to slow down considering the overpopulation and tendency of people to convert into urbanized citizens. The population of Bangladesh is predicted to reach about 260 million in the mid-21st century, which will bring about severe food shortage in the



Bangladesh is not food secure and the probable future challenges may make the situation more critical. However, climate change is considered as one of the key challenges for food security. Food

coming years.

Investment in sustainable agricultural and fisheries’ productivity growth should be ensured to get sustainable supply of food over the long term. ►

► This includes investment in innovations, such as climate-resilient varieties that can enable the sectors to respond to the challenges posed by climate change

If global warming is something to be taken seriously and the rise in water level will inevitably inundate a good portion of the country then adaptability is the solution for Bangladesh. More commercial farming of aquatic plants should be introduced as well as growing from soil planted vegetables to growing from water surface. Closer to the shores in the Bay of Bengal the ubiquitous “Sea Weed” the high nutritious plant used in Sushi and snacks can be grown commercially.

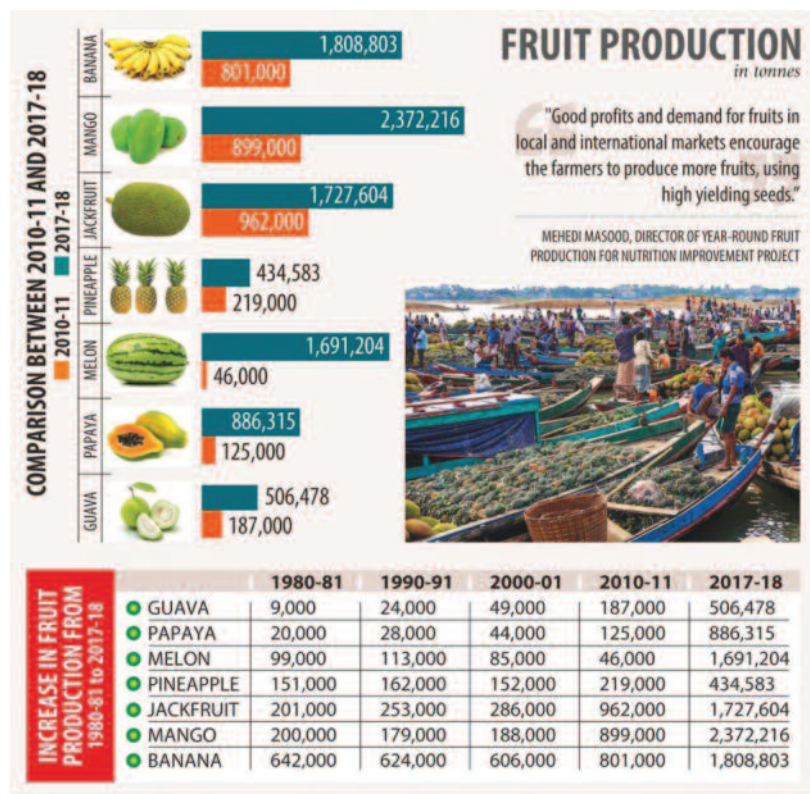
As rice is the main staple diet contributing to over 63 percent of the caloric intake for urban consumers and over 71 percent for the rural population, with a much smaller percentage wheat or maize in the form of flour consumed, more than 73% of the arable land is utilized for the plantation of these crops. That leaves about a quarter portion of the land for cultivation of other basic essentials so Bangladesh must tackle not only proper land management but also crop management to ensure food safety net for the country. Also Bangladesh household and income expenditure for food accounted for nearly 54 percent of total consumption expenditures, a share approaching 60 percent in rural areas. These data underscore the predicament not only of the 60 million Bangladeshi still struggling to climb out of poverty, but of the millions more that soaring food prices are dragging below the poverty line.

Contemporary technologies should be developed and disseminated to the farmers. Farmers

should be encouraged to cultivate diversified crops. Besides, more studies should be conducted on the climate change and the strategies to cope with it.

Bangladesh goes through periods of bumper farm harvest without benefitting much on the windfall due to poor infrastructure support for the farmers. Middlemen are the biggest hurdles to the farmer’s interest. As logistics are the main determining factors in the profitability of the farmer’s product, other solutions can be implemented to provide solutions to seasonal uncertainty of market price of their product.

In the last decade Bangladesh has managed double and even triple the productions of fruits and vegetables. But in spite such bounty farmers could not really capitalize on the efforts as most of the time their product has no means to reach the market. World Food Program estimates that every year about 35% fruits and vegetables are discarded by the farmers because of their inability to market them in a gainful manner.



► To tackle food security and promote agro based economy the country need to focus on the following ideas:

- Developing production efficiency
- Adaptation of innovative farming methods
- Introduction new breed of fruits and vegetables
- Application of Agricultural mechanization
- Educate on Food Processing and Preservation
- Food Storage

- All types of Rice 67%
- Wheat/Maize 6%
- Potato 3%
- Jute 5%
- Vegetable 5%
- Mustard 3%
- Other Oilseed 1%
- Pulses 6%
- Spices 4%

**Agricultural Production Efficiency** is how farmers can produce the maximum harvest from a limited amount of land.

**Innovative Farming** means adapting to newer cultivation method as humans constantly discover better ideas to growing better crops.

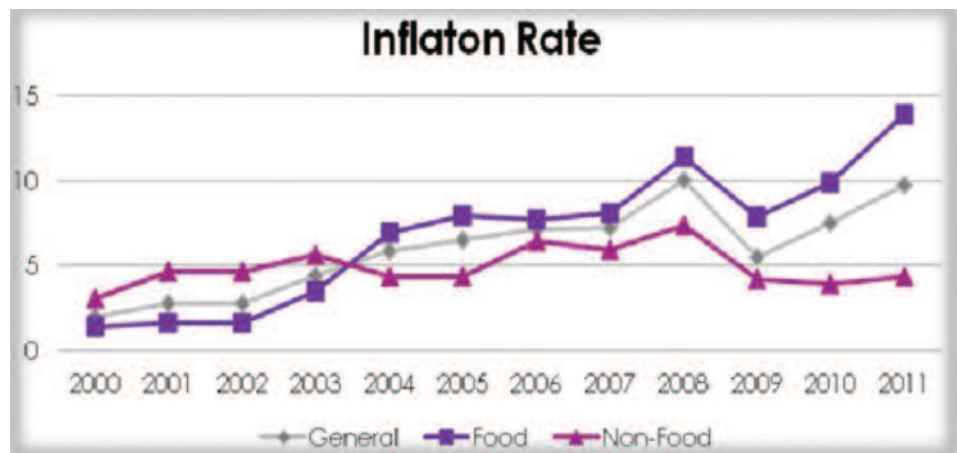
**Planting Diversified Crops** will enable farmers to leverage their risk in the dependency of a sole crop. Different types of crops can also revitalize the soil conditions.

**Agricultural Mechanization** is the trend in human evolution since animal draught power has gradually been supplemented by the use of two-wheel tractors. However, there are opportunities to use these machines more widely for transport, for threshing and other agricultural tasks.

**Food Processing and Preservation** not only extends the life of perishable farm produce but can also convert them to Value Added Products.

**Food Storage** ensures the availability of continuous food supply year round especially in times of national calamities.

In Bangladesh the following percentage of crops are planted in the Cultivated Area:



The purpose of this report is to identify the imminent food security threat and finding solutions to it. As Bangladesh is experiencing significant reduction in per capita farm size due to factors like growing population, conversion of farm lands to non-farm use and land erosion, all aspects of farming deficiencies are addressed here and proposals are suggested.

**MUJIBNAGAR** is first seat of governing power of independent Bangladesh. Currently known as Meherpur, it came into being as one of the smallest Upazilla in 1983. This place is recognized famously where the first Sovereign Bangladesh government was convened. Meherpur is basically an agro based district where 68.95% of the local population earns their livelihood through agriculture. Bangladesh's Public Private Partnership Authority (PPPA) has proposed a PPP model to initiate a pilot project for Equipment based Agricultural Farm Revolution. For this purpose they ►

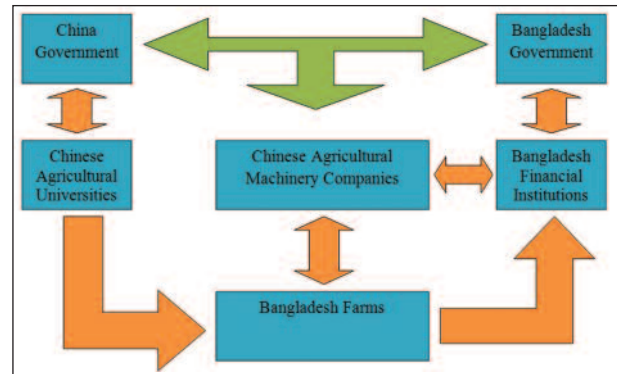
► are soliciting Foreign JV Partners to help make this plan a reality. Should this pilot project be successful then the idea is to duplicate the model nationwide.

Sino Bangla SilkRoad Company Limited, a consultancy firm, shares the idea of the PPPA and has already worked on constructing the model of this pilot project. We have a comprehensive study and proposals will work exactly to a successful outcome of project. We have also contacted Chinese Agricultural institutions and government departments and have received favorable response to which we hope we can arrange cooperation according to the PPP model.

As the name suggest, Equipment based Agricultural Farm Revolution, emphasis is given on the mechanization of farming for the pilot project in Meherpur. Along with the transfer of technology to be introduced in modernizing the farming method will revolutionize the agricultural development of Bangladesh.

China and Bangladesh share much similarity in the type of farmland available. Unlike western countries where farms are typically of mega size in hundreds or thousands of acres at a stretch, but farms in this region are mostly family owned subsistence farmers with land size ranging from half an acre to an acre. For such types of farmland specially designed farming tools are needed. When we talk about mechanized farming we typically mean large farm machinery cultivating large expanse crop land for as far as eyes can see. Whether it is soil tilling, planting, irrigation are harvesting we have watched videos of machinery at work in the great plain of America, Argentina or Ukraine but these equipments are of no use to a country like Bangladesh. China has been leading the way in many innovative small scales farming machinery that are perfectly suited for Bangladesh. So we believe a PPP plan can be structured involving both the governments of Bangladesh and China and private agricultural

machinery companies of China and participate with their equipments and expertise to a business model for a win win objectives for all parties.

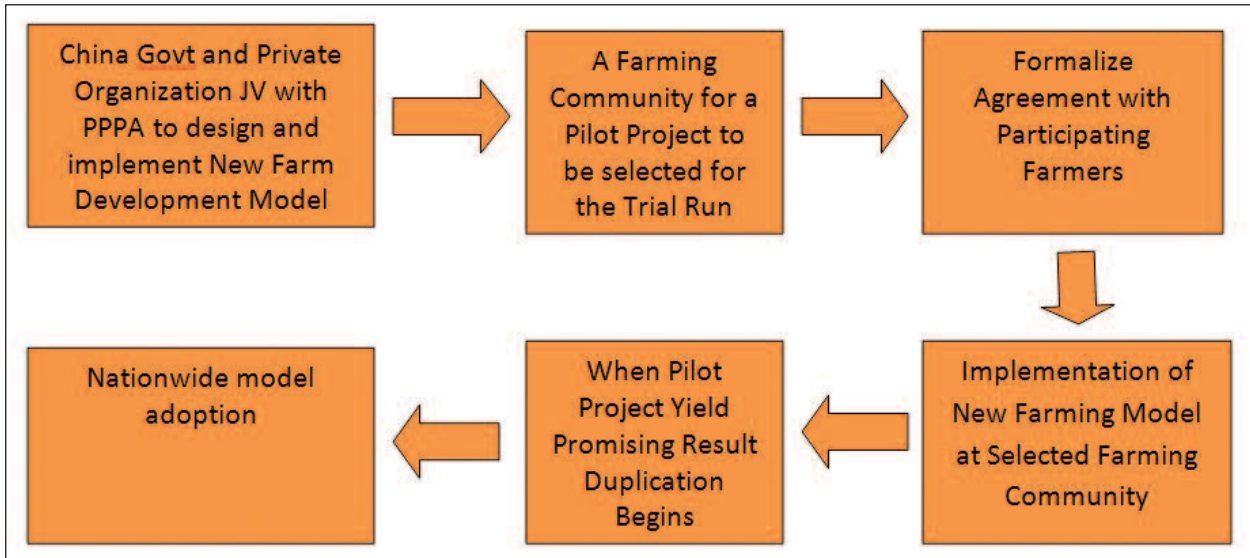


Sino Bangla SilkRoad Company Limited (SBSCl) a consultancy firm, has communicated with many farm machinery manufacturer having patents to many innovative technologically advanced farm equipments that are ideally applicable to Bangladesh agricultural community. SBSCl has also conducted meetings with Agricultural Research Institute of China for extending support from the government level in developing and growing the agriculture sector of Bangladesh. SBSCl believes that a concerted effort from multiple participants like Local, Provincial and Central Chinese government along with Chinese agricultural machine manufacturer and Chinese food product importers can participate in some form of cooperation with the Public Private Partnership Authority of Bangladesh to strategize a plan to completely revolutionize Bangladesh's farming technique and business model of marketing their products from farm to consumers both domestically and internationally. As China has recently opened their market for Bangladesh's product tax free, it is high time Bangladesh gear up its production capabilities to access that market. Agriculture product manufacturing is a labor intensive industry so Bangladesh will stand to benefit in the near and long term. The objectives are to help the farmers understand and learn the greater benefits in preserving their farm perishables and ultimately converting them to Value ►

- ▶ **Added Products.** A new farming model and marketing system will be designed and implemented and for that a qualified farming community will be selected as a pilot project.

Farm will remain independent but they will participate in the program.

Farm will be contracted to PPPA and partners and farmers will work as business partner.



These are the objectives of the revolutionary farming system:

- Minimizing or efficient consumption of farm resource like water, fertilizers.
- Maximizing the farm output.
- Efficient use of labor.
- Reducing or eliminating the use of harmful pesticides.
- Introduction of new varieties of cash crop.
- Learning how to operate farm equipments to maximize efficiency in planting and harvesting.
- Teaching farmers how to process and preserve the perishable crops for storage.
- Teaching farmers how to convert their crops to Value Added Products.

Several scenarios of farming model can be adopted to ensure a successful outcome. The following plausible method can considered.

- Farm will run as cooperatives under the directives of the Chinese partners.

**Agrivoltaics Farming.**

Agrivoltaics (or otherwise known as farming crops under solar panels) can boost food production, electricity, and save water. Building resilience in renewable energy and food production is a fundamental challenge in today’s changing world, especially in regions susceptible to heat and drought. Agrivoltaics, also known as solar sharing, is an idea that gained traction in recent years. Few studies, however, have monitored all aspects of the associated food, energy, and water systems, and none have focused on dryland areas—regions that experience food production challenges and water shortages, but have an overabundance of sun energy. Many of us want more renewable energy, but where do you put all of those panels? As solar installations grow, they tend to be out on the edges of cities, and this is historically where we have already been growing our food, So which land use do we prefer? Food or energy production? This challenge strikes right at the intersection of human-environment connections. Agrivoltaics is the answer to balancing both. ▶

► Research has found that the Agrivoltaics system significantly affected three factors that affect plant growth and reproduction—air temperatures, direct sunlight, and atmospheric demand for water. The shade the PV panels provided resulted in cooler daytime temperatures and warmer nighttime temperatures than the traditional, open-sky planting system.

There was also a lower vapor pressure deficit in the Agrivoltaics system, meaning there was more moisture in the air. It is also found that many of our food crops do better in the shade of solar panels because they are spared from the direct sun. In fact, total crops like pepper, jalapeno, and cherry tomato plants production was three times greater under the PV panels in an Agrivoltaic system, and tomato production was twice as great. Jalapenos produced a similar amount of fruit in both the Agrivoltaics system and the traditional plot, but did so with 65% less transpirational water loss. It is found that the Agrivoltaics system significantly affected three factors that affect plant growth and reproduction—air temperatures, direct sunlight, and atmospheric demand for water. The shade the PV panels provided resulted in cooler daytime temperatures and warmer nighttime temperatures than the traditional, open-sky planting system. It has been found that each irrigation event can support crop growth for days, not just hours, as in current agriculture practices. This finding suggests we could reduce our water use but still maintain levels of food production. It is noticed that soil moisture remained approximately 15% higher in the Agrivoltaics system than the control plot when irrigating every other day.

Combining Solar Power Generation and farming is becoming very practical and efficient use of land and resource. This project is one which uses available space in the most effective possible manner. Taking advantage of space under solar panels

is an innovative way to create a good environment for mushrooms to grow. The environment needs to be dark and humid for mushrooms to spawn. This idea is suitable to create environment for farming by making use of vacant space under the solar panels. The newest developments in solar technology is to discover how mushroom farming and solar power are being combined to make improvements for farms. Beside mushrooms many other vegetables can be grown under the solar panels that require partial shade to grow. Most importantly for remote or far flung areas from main power grid, the power generated from this Solar Power can be utilized locally.

Climate change is already disrupting food production across the globe so this methodology is an innovating and game changing solution to our two very basic challenges, growing food and producing electricity.



Examples of a few exportable Value Added Products:

- Fermented Radish
- Preserved Kolrabi
- Preserved White Cabbage
- Preserved Cabbage
- Preserved Green and Red Chillies
- Fermented Bean Curds
- Fermented Kimchi
- Flash Frozen Precut Mix Vegetables
- Dehydrated Seasonal Fruits
- Fresh Fruits and Vegetables
- Licorice Sweetened Fruit Snacks





**Conclusion:**

PPPA’s vision of revolutionizing the agricultural sector can be realized with a well founded plan, a bold move and the right partners. As mentioned

earlier, all participants willing to come together for a win win cooperation in a true public private partnership of bringing economic emancipation for the farmers while supplying safe and wholesome and farm products that are free from harmful chemicals to consumers domestic and international. Farm production will increase significantly by means of adopting best seeds, implementing innovative planting techniques and utilization of mechanization for efficient and speedier harvesting.

Teaching the farmers how to convert the farm perishable to non perishable Value Added Products will finally bring the farming community of Bangladesh into the 21<sup>st</sup> century. Procurement of farm machinery and other major investment like cold storage and climate controlled warehouses can be structured with the participation from JICA or World Bank and Bangladesh Bank. Government can also help by initiating a special regulatory order to waive most taxation for this program. Chinese government will provide all training and transfer of agricultural technology free of cost and Chinese food product importers will in some form facilitate the exports of these farm products to China and elsewhere including the handling of logistics.

**Realizing a true Greener Sustainable Bangladesh.**

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**Matthew J Yang (Matt)** a Chinese-American researcher has a Masters of Business Management from the USA and has worked in the US financial market for the past three decades. During the 2008 Financial Crisis, Matt was a contributing member team in the framing of the Bill for the Frank-Dodd Wall Street Reform and Consumer Protection Act after the worst financial meltdown in the history of the US. Quartz, a company formed by Matt is a think tank to collect, research and evaluates business data to help the investors in Bangladesh including the State Owned Enterprises.

পপুলার লাইফের বীমা দাবীর ৩,২৯৫ টি চেকে ৬,৬৯,৭৩,৭৬৯ (ছয় কোটি-  
উনসত্তর লক্ষ তিয়াত্তর হাজার সাতশত উনসত্তর) টাকা পরিশোধ



পপুলার লাইফ ইনস্যুরেন্স কোম্পানী লিমিটেড এর ৩,২৯৫ জন বীমা গ্রাহকের বীমা দাবীর মোট ৬,৬৯,৭৩,৭৬৯/- টাকার চেক হস্তান্তর উপলক্ষে ইনস্টিটিউশন অব ডিপ্লোমা ইঞ্জিনিয়ার্স বাংলাদেশ (আইডিইবি) মিলনায়তনে আলোচনা সভা অনুষ্ঠিত হয়। অনুষ্ঠানে প্রধান অতিথি ছিলেন বীমা উন্নয়ন ও নিয়ন্ত্রণ কর্তৃপক্ষ এর চেয়ারম্যান মোঃ শফিকুর রহমান পাটোয়ারী। কোম্পানীর ব্যবস্থাপনা পরিচালক ও সিইও এবং বাংলাদেশ ইনস্যুরেন্স ফোরামের প্রেসিডেন্ট বি এম ইউসুফ আলীর সভাপতিত্বে উক্ত অনুষ্ঠানে বিশেষ অতিথি ছিলেন বীমা উন্নয়ন ও নিয়ন্ত্রণ কর্তৃপক্ষের সম্মানিত সদস্য গকুল চাঁদ দাস ও নির্বাহী পরিচালক (যুগ্ম সচিব) খলিল আহমদ। অনুষ্ঠানে ধন্যবাদ জ্ঞাপন করেন কোম্পানীর অতিরিক্ত ব্যবস্থাপনা পরিচালক বি এম শওকত আলী। উক্ত অনুষ্ঠানে আরও উপস্থিত ছিলেন সাবেক অতিরিক্ত সচিব ও কোম্পানীর সিনিয়র কনসালট্যান্ট আবদুল আউয়াল হাওলাদার, সিনিয়র ডিএমডি নন্দন ভট্টাচার্য, ডিএমডি সৈয়দ মোতাহার হোসেন, মোঃ নওশের আলী নাসিম, মোঃ আবু তাহের ও মোঃ হাবিবুর রহমান প্রমুখ। ছবিতে অতিথিবৃন্দকে বীমা দাবীর চেক হস্তান্তর করতে দেখা যাচ্ছে।

জীবন বীমায় বিশ্বস্ত নাম



পপুলার লাইফ ইনস্যুরেন্স কোম্পানী লিমিটেড

# Exposing youth to national security

Syed Ishtiaque Reza



March 26 and 27, 2021, the 50<sup>th</sup> anniversary of Bangladesh's independence will be remembered by the people in Brahmanbaria differently as the town was once again ravaged to

ashes as it was during liberation war in 1971. Militant activists of Hefazote Islam, a religious political outfit, struck at different points in the town simultaneity destroying all memories of liberation war including the mural of Bangabandhu Sheikh Mujibur Rahman, municipal corporation, office of AC Land, Music Academy and houses belong to pro-liberation people and freedom fighters. They showed their muscles almost everywhere at that time in the name of protesting the visit of Indian Prime Minister Narendra Modi as a guest in our celebration of 50<sup>th</sup> year of independence.

Millions of Madrasa students are regularly used

by the Hefazot leaders for attacking government offices and establishments belong to liberal secular people. Given the growing influence of these terrorist outfits, Bangladesh population, especially the youths are quite vulnerable to such threats. These threats include exposure to extremist ideology and propaganda through internet. We are watching that the social media sites are flooded by militancy promoting messages from Bangladesh.

Violent protests and agitations by Madrasa students resulted in a trail of deaths and destruction. Not only in Brahmanbaria, terrorist attacks at Salta, Faridpur, Hathazari in Chittagong and Baitul Mokarram Mosque in Dhaka show our acute vulnerabilities. Terrorists have been able to induce terror and fear amongst the population by their violent actions.

As a developing economy, we have to recognise the power of the youth, a force which has great potential and one that needs to be harnessed towards nation-building. The current trend of the youth being hyper-active on the social media needs to be channeled by diverting their energy towards national integration and build-▶



*Picketing of Hefazat-e-Islam.*

► ing a pluralistic society. The situation, as it is developing, has to prompt the government to re-design national security policy with economic progress as its core.

Two violent and brutal incidents - the Shapla Square episode on May 5 in 2013 and this time the anti-Modi agitations by Hefazot, highlights persisting threats to the internal security of the country, which have become complex and extensive over the years.

The destructions in Brahmanbaria clearly exposed two things - the weakness of the ruling party to mobilise themselves and the common people and lack of coordination among various intelligence agencies and law enforcement departments. Militant outfits get strength from the fragmentation and confusion over the war on terror among the security, political and civil society leadership in Bangladesh.

Another strong reason is inequality among the population. Despite higher rate of GDP growth, the growth is highly uneven which is surging inequality among the people even in various regions.

Tribalism, feudalism, weak governance, corruption and poor socioeconomic conditions are threat enablers while sectarianism, orthodox nationalism and extremism are threat multipliers. When surge of social media is encouraging innovation across the world, the religious outfits in Bangladesh are using these platforms for spreading communal and militant messages provoking millions of teen aged and young Madrasa students to take law in their hands. Violent non-state actors on the internet pose serious security challenges for all of us.

Unfortunately, we do not expose our youth to even the rudimentary aspects of national security and its impact on society. Besides substantial issues like the survivability of nation states, it is important to have the youth understand the basic concept of national security and the impact it has on economic growth. This is very important in a country like Bangladesh that has a very strong young demographic profile.

The time is now to take initiatives to think about national security perception of the youths. This will instill a greater sense of patri-►

►otism in them. I talked to a cross section of youths studying in public and private universities and madrasas. My finding is disappointing. Secular students think about career while the madrasa students are more oriented towards grabbing the state power. This is time for us to think. We need more schools than madrasas and we need to take initiatives to expose our families to expose their children students to the very basics of national security and make them realise that national security requires the active engagement of all citizens, as it is a shared responsibility. If we are not serious about it, one day we will see that the country is occupied by the militant outfits as it happened in Pakistan.



Given the growing influence of Islamic militant ideology, joblessness among the youths, high level of inequality among the population, national security threats will be far more relevant to us than ever before. The spread of terror networks is making the management of internal and external security challenges increasingly complex.

Engaging the youth from all communities would empower and encourage them to play a larger role in national security. Given the current reality, wherein the youth - between 15 and 25 years of age - are being indoctrinated, it

would also help to get them away from fundamentalist outfits. The youths are unfortunately involved in large scale violence, due to instigation by some political parties, groups and individuals. All such actions are highly detrimental to national well-being and national security. There is an urgent need to promote awareness, through educational institutions, through media, through community mobilisations about national security and its impact on various facets of the country's well-being.

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*Syed Ishtiaque Reza is the Editor in Chief of GTV.*



দুর্ঘটনা-দুর্যোগে/সবার পাশে সবার আগে

অগ্নিকাণ্ড, সড়ক ও নৌযান দুর্ঘটনা, উদ্ধারকাজ, রোগী পরিবহন,  
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*The Chinese Defense Minister General Wei Fenghe met the Bangladesh Army Chief General Aziz Ahmed at Senakunja.*

## **Relations between Bangladesh and China will be strengthen**

### **SW Desk Report**

General Wei Fenghe, Member of Central Military Commission, State Councilor and Minister of National Defense of China, visited Bangladesh on April 27th, 2021. During the visit, he called on H.E. Abdul Hamid, Honorable President of Bangladesh. Ambassador Li Jiming accompanied General Wei during the visit.

Before the call-on, General Wei held an in-depth discussion with General Aziz Ahmed, Chief of Army Staff of Bangladesh, regarding international and regional situation as well as relations

between the two countries and two militaries. General Wei also paid tributes to Father of the Nation Bangabandhu Sheikh Mujibur Rahman at Bangabandhu Memorial Museum and laid a wreath at Shikha Anirban.

General Fenghe was appointed as the head of China's national defence ministry at the 13th National People's Congress on 19 March 2018.

The visit is taking place when Bangladesh and China are in discussion over Covid-19 vaccine cooperation. ■

## BRIEF NEWS

## US approves potential sale of up to 12 weapons-ready MQ-9B UAVs to Australia



Department has approved a potential USD1.65 billion sale to Australia of up to 12 weapons-ready MQ-9B UAVs, along with related equipment and services. (GA-ASI)

The US State Department has approved a potential USD1.65 billion Foreign Military Sale (FMS) to Australia of up to 12 weapons-ready MQ-9B medium-altitude, long-endurance (MALE) unmanned aerial vehicles (UAVs), along with related equipment and services.

The US Defense Security Cooperation Agency (DSCA) announced on 23 April that the government in Canberra requested to buy the UAVs, which are made by General Atomics Aeronautical Systems Inc (GA-ASI), along with 15 Raytheon Multi-Spectral Targeting Systems-D (MTS-D), 16 Lynx AN/APY-8 synthetic aperture radars featuring ground moving target indicators, 15 Rio communication intelligence systems, and 36 embedded global positioning systems/inertial navigation systems with selective availability anti-spoofing modules.

The proposed sale, which still needs to be approved by the US Congress, also includes six KMU-572 Joint Direct Attack Munition (JDAM) tail kits for 500 lb bombs; four MXU-650 airfoil groups for 500-lb Paveway II GBU-12 laser-guided bombs (LGBs), seven MXU-1006 airfoil groups for 250-lb Paveway II GBU-58 LGBs, four MAU-169 or MAU-209 Computer Control Groups for 250-lb/500-lb Paveway II GBU-58/GBU-12 LGBs, six FMU-139 fuse systems, 12 MK-82 general purpose 500-lb inert bombs, and five high-bandwidth compact telemetry modules, according to the DSCA.

## Fortem Technologies qualifies DroneHunter with FAAD C2

Fortem Technologies' DroneHunter counter-unmanned aerial vehicle (C-UAV) system can now integrate with the US Army's Forward Area Air Defense Command and Control system (FAAD C2).

The US Army Joint Counter-UAS Office (JCO) selected FAAD C2 as the service's C2 standard for addressing the threat posed by small UAVs. The system is designed to be capable of integrating with a wide range of sensors and effectors to build rapid defence against such threats.

DroneHunter is a multirotor platform that intercepts rogue UAVs using a non-kinetic, net tether approach. It is part of Fortem Technologies' SkyDome system, which encompasses different elements that can be operated together or separately, including DroneHunter. Another element is SkyDome Manager, an artificial intelligence (AI)-based software that functions as a C2 system for DroneHunter.

Army operators would use FAAD C2 to command SkyDome to perform its functions, in turn relaying messages to DroneHunter, said Jim Housinger, senior programme manager at Fortem Technologies.

DroneHunter would then proceed to autonomously capture an adversarial UAV. However, FAAD C2 will also incorporate the capability for the operator to intervene in such an operation, calling DroneHunter back during a mission, he said.

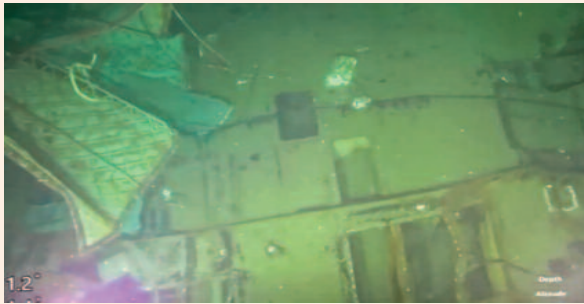
"It's deeply integrated, giving FAAD C2 the capability to order DroneHunter to abort its mission," noted Housinger. The integrated system will also incorporate a version of the company's TrueView radar, built into the DroneHunter UAV, he added.



The DroneHunter uses a net tether to capture rogue UAVs. It can now integrate with US Army's FAAD C2 system. (Fortem Technologies)

- ▶ Fortem Technologies has been working closely with Northrop Grumman, the developer of FAAD C2, on the integration, as well as with the US Army. There have been several test events in Alabama, Arizona, and in Utah, where Fortem Technologies is based.

## Photos show missing Indonesian navy submarine found broken up on seabed



Wreckage from the missing Indonesian navy submarine KRI Nanggala has been found on the seabed near Bali. Photograph: AFP/Getty Images

A missing Indonesian submarine has been found, broken into at least three parts, deep in the Bali Sea, army and navy officials have said, as the president sent condolences to relatives of the 53 crew.

On Sunday, the Indonesian military head, Hadi Tjahjanto, said there was no chance of finding any of the crew alive.

He said: "With deep sadness, I can say that all 53 personnel onboard have passed. We received underwater pictures that are confirmed as the parts of the submarine, including its rear vertical rudder, anchors, outer pressure body, embossed dive rudder and other ship parts.

"With this authentic evidence, we can declare that KRI Nanggala-402 has sunk and all the crew members are dead."

Rescuers found new objects, including a life vest, that they believe belong to those who were onboard the 44-year-old vessel, which lost contact on Wednesday as it prepared to conduct a torpedo drill.

The navy chief of staff, Yudo Margono, said the crew was not to blame for the sinking. "The KRI Nanggala is divided into three parts, the hull of the ship, the stern of the ship, and the main parts are all separated, with

the main part found cracked," he said.

The president, Joko Widodo, earlier confirmed the discovery in the Bali Sea and sent the families of the victims his condolences. "All of us Indonesians express our deep sorrow over this tragedy, especially to the families of the submarine crew." - *Reuters*

## NASA's Ingenuity Mars Helicopter Succeeds in Historic First Flight

Monday, NASA's Ingenuity Mars Helicopter became the first aircraft in history to make a powered, controlled flight on another planet. The Ingenuity team at the agency's Jet Propulsion Laboratory in Southern California confirmed the flight succeeded after receiving data from the helicopter via NASA's Perseverance Mars rover at 6:46 a.m. EDT (3:46 a.m. PDT).

"Ingenuity is the latest in a long and storied tradition of NASA projects achieving a space exploration goal once thought impossible," said acting NASA Administrator Steve Jurczyk. "The X-15 was a pathfinder for the space shuttle. Mars Pathfinder and its Sojourner rover did the same for three generations of Mars rovers. We don't know exactly where Ingenuity will lead us, but today's results indicate the sky – at least on Mars – may not be the limit."

The solar-powered helicopter first became airborne at 3:34 a.m. EDT (12:34 a.m. PDT) – 12:33 Local Mean Solar Time (Mars time) – a time the Ingenuity team determined would have optimal energy and flight conditions. Altimeter data indicate Ingenuity climbed to its prescribed maximum altitude of 10 feet (3 meters) and maintained a stable hover for 30 seconds. It then descended, touching back down on the surface of Mars after logging a total of 39.1 seconds of flight.

"Now, 117 years after the Wright brothers succeeded in making the first flight on our planet, NASA's Ingenuity helicopter has succeeded in performing this amazing feat on another world," Zurbuchen said. "While these two iconic moments in aviation history may be separated by time and 173 million miles of space, they now will forever be linked. As an homage to the two innovative bicycle makers from Dayton, this first of many airfields on other worlds will now be known as Wright Brothers Field, in recognition of the ingenuity and innovation that continue to propel exploration." - *nasa.gov* ■

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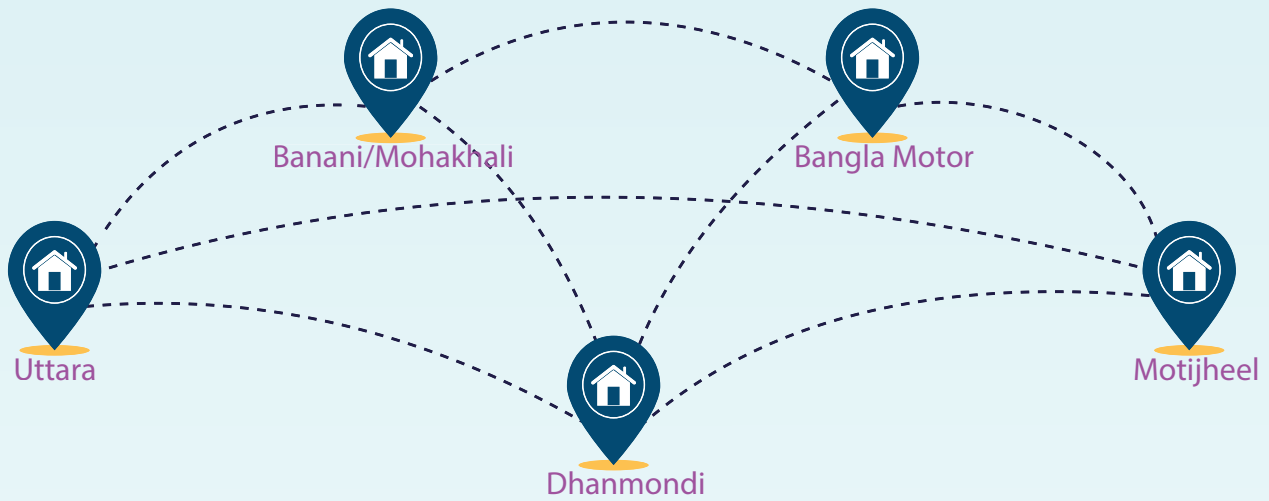


*The* **ACME** *Laboratories Ltd.*  
Dhamrai, Dhaka, Bangladesh

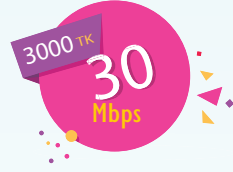
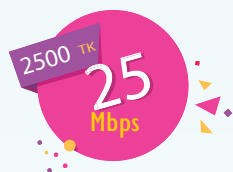
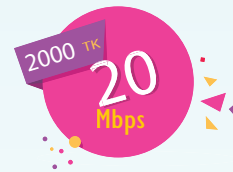
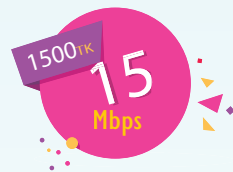
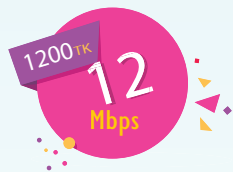
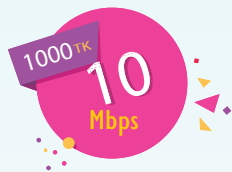
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