

Airpower in the Grey Zone

Air Marshal Anil Khosla (Retd)[@]

The Grey Zone is characterised by intense political, economic, informational, and military competition more fervent in nature than normal steady-state diplomacy, yet short of conventional war. It is hardly new, however. The cold war was a 45-year-long grey zone struggle in which the west succeeded in checking the spread of communism and ultimately witnessed the dissolution of the Soviet Union.

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Abstract

Recent trends world over, indicate that national political objectives are increasingly being achieved by grey zone operations, without official declaration of war. The grey zone operations include multifarious forms of state sponsored activities that are being carried out in the metaphorical zone between war and peace, maintaining the threshold below that of conventional war. They are not limited to military domain and characterised by high degree of denial and ambiguity. World at large, and India, is in a grey zone conflict scenario and is likely to remain in it for a long time. Airpower can play a major role and can effectively be utilised in many ways in these grey zone operations. This requires a change in mind-set, organisational adaptation and some amount of capability enhancement, reorientation, and training. Finally, innovation and out of the box approach is essential to deal with grey zone situations and threats.

Introduction

Earlier days states or nations used to resort to open armed

conflicts by declaring war, with the aim of achieving an objective using force. Recent trends indicate that national political objectives are increasingly being achieved without official declaration of war. There are multifarious forms of state sponsored activities that are being carried out in the metaphorical zone between war and peace. These grey zone activities have become a norm in the recent years. The grey zone warfare is best defined as an aggressor engaging in actions that circumvent traditional norms and laws of war, in the pursuit of political strategic objectives. The grey zone conflict operations are unclear and ambiguous in character, and are orchestrated in such a way that the threshold is maintained below that of conventional war. These conflicts are carried out in any of the multiple domains using variety of means as a weapon.

Air power, besides offensive use, can also be effectively utilised in many ways in non-conventional hostile situations categorised above. Various aspects of grey zone operations need to be deliberated from the point of view of airpower involvement. Certain amount of reorientation would be required in application of airpower in these grey zone situations supported by capability enhancement in certain fields.

Grey Zone Operations or Conflicts

Definition. Grey zone conflicts, also referred by some as shadow wars, have been defined in many ways. They are not formal or traditional conflicts or full-scale wars between nations or states. If war and peace were to be given the shades of black and white, then *grey zone operations or conflicts would fall somewhere in between the peace-conflict continuum*. One of the definitions of the grey zone conflict is 'the contested arena somewhere between routine statecraft and open warfare'. Two major characteristics of grey zone conflicts are that the threshold is maintained below the level of full-scale war, and second that, the means of operations

are not restricted only to military actions. Varieties of instruments of power, often asymmetric and ambiguous in character, are used to achieve the objectives.

Means. Grey zone conflicts focus on the weaknesses and the vulnerabilities of countries being addressed. Aggressors use a hybrid approach to exploit their adversary's weaknesses through the use of Diplomatic, Informational, Military and Economic (DIME) instruments of power. The vulnerabilities could include weak economic conditions, internal disparities, ethnic alignments, and religious polarisation etc. Based on these vulnerabilities, local population, disillusioned elements or even the diaspora could be exploited. *The grey zone activities could be in the domain of politics, economy, social movements, diplomacy, cyber, space, information, psychological and / or communications.*

Characteristics. Grey zone operations are generally sub-conventional in nature employing irregular means. They could be overt or covert, carried out by proxy players or non-state actors. Ambiguity is essential to keep conflict in the space between peace and war, and the aggressors always endeavours to maintain a high degree of ambiguity and deniability. Invariably, these operations are conducted in multiple domains, at times using both kinetic and non-kinetic modes simultaneously. They generally include the nuances of other classifications of hostile actions like no war no peace, hybrid operation, asymmetric and sub conventional warfare etc.

Comparison / Differentiation. Grey zone conflicts, no war no peace (NWNP) operations and hybrid warfare are terms often used by security analysts and academics to describe prevailing hostile conditions between two countries. NWNP operations also fall in the same zone as grey zone conflict, but NWNP operations are generally referred to military actions whereas, grey zone activities could be in any of the numerous domains mentioned above. *Grey zone conflicts and hybrid warfare are other two terms which could be confusing. Grey zone is an operational environment encompassing the space between peace and war, whereas hybrid warfare is a strategy with reference to the threats and means that are exploited in multiple domains.* These threats and means could either be employed in full-fledged open war or in grey zone conflict

situations. At the same time, *grey zone conflict and hybrid warfare are not independent of each other, they are intricately linked to each other.*

India's Grey Zone Threat Scenario

India is a large and most diverse nation with two inimical neighbours. India's myriad problems provide innumerable opportunities for the belligerent adversaries to exploit in the grey zone. The increased radicalisation in the neighbourhood has further opened up new grey spaces. Grey zone tactics is being followed both by China and Pakistan using different means.

Pakistan. Pakistan is using the low-cost option of grey zone tactics against India by promoting violent extremist groups. These non-state actor groups get funding and training in Pakistan, to carry out irregular warfare against India. The spectrum of anti-India grey zone warfare emanating from Pakistan is wide ranging from disinformation and incitement to terrorism. The grey zone activities of Pakistan include propaganda, false narratives, cyber warfare, and encouraging internal dissent and terrorism, to undermine the Indian national security.

China. China is the master of grey zone operations. This type of warfare is embedded in her philosophy, strategic thoughts, and doctrines. China has further mastered the art of converting and using anything and everything into a weapon for grey zone warfare. China practices its famous three-warfare strategy, which encompasses non-kinetic means like psychology, media, and law warfare, to achieve political ends. China has been extensively using psychological warfare and coercion against India with the aim to subdue India without fighting.

Dealing Strategy. India a large democratic and bureaucratic state is perceived to be a weak spot, ideal for grey zone operations. It will lose out if it does not adapt to the changing nature of warfare. India must prepare to deter China and Pakistan from extreme forms of grey zone aggression. An important part of any grey zone response strategy is to undertake institutional reform. These organisational and structural reforms, need to be embedded in the

current structures, in a phased manner without causing too much of turbulence. A word of caution, a change for the sake of change due to peer pressure needs to be avoided. The change should be based on factors like our threat perception, technological threshold, economic conditions and geo-political environment. India must develop framework of strategic deterrence to deal with grey zone warfare.

Grey Zone Warfare Aspects: Relevance to Air power

Grey zone operations comprise of many components and are waged in multiple domains and dimensions. These domains may be widely dispersed like land, air, maritime, cyber, space and Information. Based on the uniqueness of each situation, aggressors would determine in which domain, they can achieve the greatest leverage in the grey zone. The goal of using these domains would be to fuse multiple tactics and techniques together to strain the opponent's resources and taking advantage of his weaknesses. *Cyber and Information domains are the most fertile domains for Grey zone operations.* A look at likely activities in these domains is required from the point of view of airpower application and involvement, i.e., how do these activities directly affect instruments of airpower and how can airpower be employed against in these situations.

Land Domain. The social space is generally the incubator for ideology and political aspirations, and it provides the necessary ingredients for any uprising or rebellion. Fuelling and supporting insurgencies is the most common grey zone activity. This may include covert or overt support resorting to arming, funding, espionage, infiltration and / or subversion. Resorting to terrorism overtly by the non-state actors has become a norm these days. These activities give rise to manmade disaster situations, requiring a rapid response. Airpower provides capability to respond with speed. Besides offensive application, airpower provides assistance to military and paramilitary forces, Special Forces (SF) and other state-controlled armed units. Transportation is the first role for rapid induction followed by sustenance. It can provide further assistance in terms of building up situational awareness [intelligence, surveillance, and reconnaissance (ISR)], setting up an aerial command post and

causality evacuation if required. All the roles and activities carried out by the air force during peace time under the purview of Humanitarian Aid and Disaster Relief (HADR) and aid to civil authorities, and other agencies, can be utilised in the grey zone warfare. Other aspect related to the land domain grey zone activities is the protection of airpower assets from terrorist attacks (like attack on Pathankot airfield).

Maritime Domain. Maritime domain can also be used in the grey zone conflict. Piracy, hijacking, sea borne attack by non-state actors on coastal targets or attacks on oil rigs etc. could be classified under maritime domain grey zone activities. Land domain disaster situations and response would also be applicable in the maritime domain. In addition disaster situations like oil slick management, sea platform fire fighting, maritime rescue and evacuation etc. could also be encountered. Air power instruments can be effectively utilised in assuaging these situations.

Aerial Domain. Latest challenge faced by the world, due to *grey zone operations in the aerial domain is the sub-conventional threat posed by aerial platforms like, unmanned platforms, drones, swarms, hang gliders and powered gliders etc.* These platforms besides being used for direct targeting are also being utilised in roles like ISR, smuggling and arms trafficking etc. In the last few years world over, concerted efforts are being made to deal with these threats. These threats need to be dealt in terms of development and employment of detection systems, anti-drone weapons / systems, engagement procedures and licensing and controlling regulations. Airpower operators, assets and systems are essential component in the entire response for mitigation of these threats.

Space and Grey Zone. Space based applications are being utilised in a number of fields like, communications, education, healthcare, navigation and ISR etc. to name a few. Increased reliance on these space-based systems also gives rise to certain vulnerabilities that have a potential for grey zone exploitation. Space operations are suited for grey zone use due to characteristics of ambiguity and difficulty in damage assessment. Anti-satellite warfare includes kinetic weapons like missiles and non-kinetic systems including jammers, laser

dazzlers or spoofing equipment. Denial of these systems would have a direct bearing on air warfare especially in terms of navigation, targeting and networked operations.

Cyber Domain. This is the most active domain even in peace time. It has the maximum potential for grey zone operations. Cyber domain has become a battlefield with cyber warfare becoming a significant component of present and future conventional and grey zone conflicts. Unlike physical attack, a cyber-attack can be launched instantaneously from anywhere, anytime with little evidence, it is hard to trace and has a high level of deniability. These characteristics make it an ideal and most favoured tool for grey zone operations. Cyber-attacks could be launched against vital infrastructure like banking, power sector and water resource management etc. or military systems and networks. Air power operations are essentially networked operations with platforms, weapons and systems networked in three dimensions (land network, aerial network and network linking ground and airborne systems). Moreover, these networks are further integrated with sister services and other agencies involved with national security apparatus and response. Denial of these networks could prove to be catastrophic and these need to be protected adequately.

Information Domain. The prevailing digital age consists of internet, social media apps, and portable electronic devices. The flow of information (or misinformation) is very rapid and availability is widespread. The narratives can be created, fabricated, changed, or manipulated, and circulated very quickly. This is ideal and advantageous for the grey zone conflict operatives. Post-strike media scrutiny and dissection of Balakot strikes is a classic example, emphasising the importance of not only execution but also need to control the narrative. Airpower practitioners need to have a multi-discipline, multi-domain, institutionalised structure to address these concerns.

Airpower Utilisation in Grey Zone Conflict

Grey zone conflicts need a whole of government, multi-dimensional approach with the application of all relevant instruments of power at their disposal. Air power resources are an

effective military tool for statecraft, characterized by flexibility, lethality, reach, rapid response and creation of shock and awe by effect-based operations. Airpower offers the war fighting components resources that can cover great distances and gain desired lethal and nonlethal effects with great precision. Air power is dynamic in its application and its effects can be switched on or off at ease and it can play an important role in grey zone operational environment. In offensive role it can provide many options however, its utilisation is not restricted only to offensive role. Airpower can reinforce the nation's course of action against grey zone warfare, with involvement in several direct and supporting roles.

Offensive Application. Kinetic application of airpower in the form of aerial attacks is one of the options available to the decision makers. Generally offensive use of airpower on own soil is avoided as it causes further alienation of own people. Multiple options are available even for the aerial attack if so decided. These could be from fighter aircraft, helicopters, or unmanned platforms with a variety of weapons. In grey zone situation generally, precision weapons are preferred to avoid collateral damage.

Aerial Mobility. Grey zone situations usually necessitate rapid response making air mobility the preferred option. Airpower can place the ground force into the region where needed and when needed, while also sustaining a critical lifeline into and out of the deployment zone. Special Forces, disaster management teams, their equipment and relief material can be inducted speedily through the medium of air. Both fixed wing transport aircraft and helicopters of varying capability are required for these tasks. Situation may demand large scale expeditionary response or insertion of smaller rapid action teams.

Situational Awareness. High degree of situational environment is required in grey zone situations and SA is generally the first victim. It is further corrupted by psychological and propaganda warfare on all pervasive social media. Versatile and adaptable airborne ISR resources are essential to any hybrid campaign. Aerial recce platforms are useful in building the situational awareness through visual, photo and electronic reconnaissance, both by day and night. They have been utilised many a time to

ascertain location of trouble spots, disruption or blockades of railway lines and roads and breaches in canal etc. If required aerial command posts can also be established for coordination of the operations.

Casualty Evacuation. Occasions do arise when injured personnel needing immediate medical attention may be required to be shifted to places where such facilities are available. These may be during the day or night. Depending on the place of evacuation and numbers of people to be evacuated either fixed wing aircraft in ambulance role or helicopters or combination of both may be required.

Air Defence. Air defence is a role or task of the air force, which is carried out 24 X 7 not only during war but even during peace time. With the proliferation of unmanned and other smaller platforms the sub-conventional threats, have been added to the list of AD threats. The vital areas and vital installations need to be protected against these threats. The spectrum of AD threats and operations has increased in the grey zone operations scenario. Appropriate detection systems and weapons [like Close in Weapon Systems (CIWS)] would be required to deal with them.

Deterrence, Posturing and Strategic Coercion. These roles and tasks are performed by the airpower instruments in both war and peace situations. They have a large scope even in the grey zone conflict scenarios. The appropriate deployment of assets and flying of specific types of missions can be used for posturing and signalling of intent.

Defence Diplomacy. Defence diplomacy is conducted by means of defence cooperation, exchange of visits and joint exercises. Like war and hostile situations, they have a role in the grey zone conflict situations as well.

Capability Enhancement / Reorientation

Airpower is commonly associated with air-delivered firepower and expeditionary capability. Airpower has a major and decisive role, even in these grey zone situations and now the air forces, world over are equipping and optimizing for low- intensity grey zone conflict scenarios. Existing airpower resources offer a large number of options; however, there is a need for some amount of recalibration and reorientation. Certain areas also need capability enhancement. These areas could include capabilities to impose measured costs on adversaries, kinetic and non-kinetic capabilities, lethal and nonlethal weapons, assets protection, organisational adaptations, technology infusion and doctrinal changes.

- **Air Mobility and Logistics Management.** Rapid mobility and induction is vital in grey zone operational scenario. An all-round capability (i.e. heavy and medium lift, fixed wing and rotary wing, manned and unmanned delivery platforms, landed and air dropped) is required. A hub and spoke system of induction and subsequent sustenance works well. Helicopters play an important role in speedy delivery in area of poor connectivity. Large numbers of operating surfaces (helipads and heliports) are beneficial especially in high terrain friction areas. Civil aviation assets with appropriate modifications need to be integrated in this effort. Integrated logistics management systems are equally essential. Automated logistics handling and disbursement ports would enhance the capability further.
- **Surgical Offensive Capability.** Offensive application of airpower invariably will be surgical in nature i.e. with precision avoiding collateral damage. Smart weapons with high degree of accuracy and adequate standoff are highly desirable. Standoff and precision capability enhancement is a continuous process and more the standoff better it is. Variety in type and extent of warheads provide more options in terms of effect generated. Air delivered, non-lethal, weapons are also needed in the inventory, as certain situations would require their use. Delivery platforms are also important. Unmanned Combat Aerial Vehicle (UCAV) capability is useful

in quite a few situations. Real time intelligence would be essential for kinetic force application.

- **Situational Awareness Enhancement.** Aerial reconnaissance and surveillance is the best way of obtaining the correct and current picture of the developing situation. Better SA can be obtained by keeping greater area under multiple sensor surveillance with better resolution. Intelligence and surveillance capability needs to be enhanced across the spectrum starting from humint to space based surveillance. Aerial vehicles, surface movements, maritime domain, communications and electronic signals need monitoring and all inputs amalgamated to produce a comprehensive battle space picture. Artificial intelligence needs to be embedded in the analysis systems to provide the desired end product on need to know basis, with decision support systems and what if options. Real time monitoring may be required to take on dynamic targets of opportunity. A Joint Surveillance and Target Attack Radar System (Joint STARS) is highly critical to the success of operations in hybrid warfare.

- **Protection and Security.** The Airpower assets could themselves be targeted in the grey zone warfare. These vital and costly assets would need security and protection from conventional aerial vectors, sub-conventional aerial threats and ground attacks. Multi layered security systems would be required for both aerial and ground threats. The aerial threat mitigation would need systems like CIWS on one end of spectrum to Ballistic Missile Defence (BMD) on the other end. Multiple threat handling systems like S-400 would be ideal for protection of cluster of VA / VPs. Automated, networked, technology based security systems would be required for the ground security.

- **All Weather Day and Night Capability.** There is no differentiation between day and night for grey zone activities. Ability to launch and use airpower assets in all types of weather and during day or night is very essential. Night vision devices can prove to be a force multiplier in this respect.

Portable lighting systems can be of immense use especially in helicopter operations.

- **Special Operation Platforms.** Aerial platforms like C-130 have a lot of utility in grey Zone conflicts. They can be employed in a variety of roles, ranging from logistical transportation to operational tasks like Special Forces team insertions and extraction, airborne command post, aerial cover, fire fighting and medical evacuation etc. Their ability to operate from short and unprepared surfaces, adds to their versatility. Roll on roll off kits are available for some of the roles mentioned above and can prove to be economical and practical.

- **Networking and Cyber Domain.** Air operations are highly network centric. In grey zone operations flow of information to numerous stake holders is especially important. Integrated networks with good architecture, supported by suitable applications will assist in building situational awareness, planning, communicating, and monitoring of situation in real time. The information flow would have to be needed to know basis to avoid paralysis due to information overload. The networks would have to have redundancies and protection measures in terms of firewalls and anti-virus systems. Monitoring control rooms with Quick Reaction Teams would help in ensuring their continued availability during hostile activity.

- **Space Based Capabilities.** The term airpower has changed to aerospace power with the aerial warfare envelope expanding to the domain of space. Space based systems and applications are embedded in every aspect of aerial warfare. In Grey zone warfare the involvement of space-based equipment and systems is on an even larger scale. From airpower operations point of view the most important capability enhancement required is in the space-based surveillance capability. Enhancement is required in terms of revisit and resolution, converting reconnaissance capability into surveillance capability.

- **Psychological War and Media.** Psychological warfare or perception war is a vital component of Grey Zone operations and is deeply embedded in them. Media engagement plan and organisational structure needs to be in place for perception management and narrative control. All stake holders need to work collectively in sync with each other. Appropriately equipped and manned operations room working round the clock is necessary for monitoring and conducting these operations.
- **Organisational Adaptation.** Organisational adaptation is required for managing the grey zone conflicts and operations. Appropriate organisational structures need to be created to investigate aspects related to information warfare, electronic warfare, cyber and space operations, strategic and Special Forces operations and technology fusion. Intention would be to develop a multi-domain rapid reaction mechanism. A proactive approach will be even better. A multi-discipline body like an aggressor group could be formed with a charter to monitor the environment, play devil's advocate by identifying possible threats and generating possible grey zone scenarios.

Conclusion

The world at large and India in particular will be in grey zone conflict scenario for a long time. Airpower has a major role in these grey zone operations. There is a need to be prepared to tackle unpredictability and not get surprised. This requires a change in mind-set and some amount of reorientation and training. In grey zone operations anything can be turned into and used as a weapon therefore, all the contingencies cannot be predicted. The need of the hour is to develop a high degree of resilience, so as to adapt to changing situations rapidly. Finally, innovation and out of the box thinking is essential.

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@Air Marshal Anil Khosla, PVSM, AVSM, VM retired as the Vice Chief of the Air Staff in Apr 2019. A fighter pilot, he wields the pen with equal adeptness as he can wield the joystick. He holds two MPhil degrees on defence and strategic studies and is currently pursuing a PhD on China. An ardent blogger (Air Marshal's Perspective) and Sudoku player, he has pursued the latter 10 times up to the national level.

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