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Vol. 5 No. 1, Spring 2010 (January-March)

Editor's Note

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1. AIR POWER IN SUB-CONVENTIONAL WARS IN THE SOUTH ASIAN REGION 1

Wars in recent years have been more in the nature of military forces against guerrilla/militant fighters and terrorists as compared to the traditional, classic military-to-military wars. Lt. Col. **Rajiv Ghose**, SM, examines the nature of such wars (clubbed under one generic classification of "sub-conventional wars") in our region and the peculiar challenges they pose to the employment of air power in such wars. Challenges to India go even further because the terrorists come from a sanctuary where the state, which possesses nuclear weapons, itself supports the war.

2. TOWARDS 'INTELLIGENT' CRUISE MISSILES: CONTOURS OF INNOVATION 31

Cruise missiles have been employed in military forces since 1944. Their shorter version, designed specially for the anti-ship role, played a key role during the Falklands War in 1982. **Sitakanta Mishra** examines the technological improvements that indicate a trend not only toward highly accurate cruise missiles, but also the potential of 'intelligent' cruise missiles that can cover long ranges and are able to select their targets and home onto them for greater accuracy.

3. **CYBER SPACE VULNERABILITIES AND CHALLENGES: THREATS TO NATIONAL SECURITY DYNAMICS** 55

Cyber space is being increasingly exploited in military and civil arenas and the advantages of doing so are enhancing the capabilities in both areas. But, as Wing Commander **M.K. Sharma** points out, there are also enormous vulnerabilities that pose serious challenges to national security, proving the historical lesson that every new capability that provides competitive advantages in war and peace, very soon must also face the challenge of its intrinsic and functional vulnerabilities being exploited by the adversary.

4. **NCW: THE DOUBLE-EDGED SWORD** 91

Network-Centric War (NCW) promises to revolutionise war in the future, not so much because it is basically a new concept, but because technology has made it possible to transfer information very rapidly to a range of users and commanders, thus, reducing the time factor for decision-making. In short and simple terms, NCW would shorten the sensor-to-shooter time in what a scholar had identified more than a decade ago in terms of “time” itself becoming the fifth dimension of war. Wing Commander **Sanjay Poduval** points out the tremendous advantages of NCW and, at the same time, cautions about its vulnerabilities in war.

5. **COMBAT SUPPORT OPERATIONS IN THE INDIAN AIR FORCE: A HISTORICAL APPRAISAL** 117

Combat support has been expanding in scope, role and effects, so much so that it has become an integral part of combat operations. Very often, the efficacy of combat support can prove to be the tipping point in combat. It is in this context that Wing Commander **A.B.S. Chaudhry** carries out a review of **Combat Support Operations in the Indian Air Force: A Historical Appraisal**. Basic understanding of their role and importance is vital for future operations since they act as force multipliers and, in many cases, as force itself and, consequently have enormous influence on the doctrine, tactics and strategy of air warfare.

6. **CLIMATE CHANGE AND NATIONAL SECURITY: CONTRARIAN OR INTERRELATED?** 137

Wing Commander **Manoj Kumar** has delved into the question he has raised in the title of his study and comes to the conclusion that climate change issues have a profound and long lasting impact on national security which, in some cases, may cause irreversible impact. Some of the effects of environmental changes can already be identified. With climate change, we may expect a significant phenomenon of global warming which, in turn, would melt the earth's ice caps and lead to a rise of the sea level. This, in turn, could submerge many islands and areas, part of the mainland, with enormous impact on demographics.

7. **INDIA-AFGHANISTAN RELATIONS DURING THE SOVIET INTERVENTION IN AFGHANISTAN** 153

Soviet military intervention in Afghanistan at the end of 1979 was, from the very beginning, an act that inevitably created a strong adverse impact on India's security, far beyond imaginable limits. And the after-shocks have continued till today and threaten to go on for an undefined period into the future now that the sole superpower has been sucked into the war against terrorism. Dr. **K.N. Tennyson** looks back at the historical processes that produced the constraints and initiatives that India took to try and get the Soviet military to withdraw from Afghanistan, while being unable to take a public position against the Soviet Union.