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Vol. 6 No. 3, Monsoon 2011 (July-September)

Editor's Note

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1. SOME ASPECTS OF OUR WARS IN FUTURE

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Since the end of the Cold War, the United States and its allies (all developed countries, except for Pakistan) have fought many wars. Two decades of a number of wars can lead us to conclusions that may or may not hold true in our own case. This is not to deny that India would not face 4th Generation Warfare (described by many terms) which, in reality, it has been fighting for the past two decades, waged by our neighbour. But robust focus on such wars and the Western experience of the global war on terrorism could lead us to many lessons that we should be careful not to imbibe. Air Commodore **Jasjit Singh** points out some key factors of the trends in future warfare and specifically deals briefly with the three war scenarios that India may possibly face.

2. AIR POWER IN STABILITY AND ANTI-TERRORIST OPERATIONS

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Air Vice Marshal **Arjun Subramaniam** deals with the challenges and capabilities of air power in some detail wherein air power would remain crucial in the future, though in India's case, it applies much more to operations outside the country (except for airlift and surveillance missions). However, we need to understand the limits and challenges of employment of modern air power in stability and anti-terrorist operations

if for no other reason than the fact that the Indian Air Force (IAF) has been part of UN Peace-Keeping Operations with combat components since 1961.

3. AIR POWER AS AN INSTRUMENT OF COERCIVE DIPLOMACY 53

Air Vice Marshal **M. Bahadur** examines the role of air power from another angle. Earlier studies, like the seminal study by Barry Blechman, et al (*Force Without War: US Armed Forces as a Political Instrument*, 1978, and Philip Zelikow, *Journal of Strategic Studies*, March 1982) clearly indicated that air power had been a *crucial and overwhelmingly dominant component* of almost all the 259 instances (between 1946-1982) of use of US military power in what is now termed as operations other than war, especially where the intent is coercion to serve perceived national interests, and as a tool of foreign policy. More recent examples lead to deepening of the earlier conclusions.

4. THE BARRIERS TO MILITARY TRANSFORMATION 69

Transformation of military power has been part of the history of warfare from times immemorial, triggered mostly by some technological development. For example, the introduction of the railways and telegraph had dramatically transformed the nature of warfare in the 19th century. But very often, the military forces of nation-states had been reluctant to internalise such changes into the force structure, largely due to the conservative nature of the military professions. With technology now advancing exponentially, Wing Commander **Rajiv Puri** looks closely at the barriers that come in the way of military transformation in modern times, highlighting the problem of slow pace of transformation of the mind as a major barrier in a set of other difficulties.

5. CHINA'S CIVIL AVIATION INDUSTRY 93

Deng Xiaoping's initiation of the four modernisations after the Sino-Vietnam War in 1979 focussed heavily on reforms not only in the

economic sector but much more on the building of a modern science, technology and industrial base, while eliminating the effects of the Cultural Revolution. Inevitably, the focus on the civil aviation industry was far greater than in the military sector although the spin-off factor would come in handy when China got access to Soviet/Russian military and Western civil aviation technology. Wing Commander **Vishal Nigam** focusses on the civil aviation industry in the People's Republic of China (PRC) as part of his overall study project on China's aircraft industry to highlight its rapid growth.

6. INFORMATION WARFARE: ELEMENTS AND FORMS 113

Information and communication technology has dramatically altered not only the means and methods of communication but is a major factor in globalisation of the international system. This has been the basis of the Revolution in Military Affairs (RMA) for the past two decades and includes many sub-revolutions in terms of sensors and space-based systems (like the Global Positioning System – GPS) that enhance the role of military technology and warfare in fundamental ways. One must, of course, make a distinction between information warfare and information in warfare, as Wing Commander **Rakesh Arora** argues in this study, besides laying out the various aspects of information warfare.

7. THE CHANGING PATTERNS OF GLOBAL CLIMATE CHANGE ARCHITECTURE 145

The debate on global climate change has been going on for more than three decades, with little, if any, consensus on establishing a global architecture to deal with the inexorable drift toward the serious and adverse implications of climate change. The main reasons for this are the conflicting and contradictory situation, interests, and policies of the developed countries, on one side, and the developing countries, on the other. In the larger debate, it is often forgotten by both sides that environmental issues and climate change also have serious implications

for the armed forces across the world, thus, bringing the issue of national security into the debate. Ms. **Dhanasree Jayaram**, a young scholar at the Centre, lays out the changes that are taking place in these areas that need wider and deeper discussions and understanding by all segments of Indian society.

8. WEST ASIA: ONGOING CONFLICTS AND INDIA 163

West Asia, extending from Egypt in the west to India in the east, and mostly termed as Near and Middle East in US vocabulary, has been in turmoil and experiencing wars for the past six decades. Wing Commander **Sharad Srivastava** surveys the recent and current conflicts going on in the region and defines the nature of Indian interests and policy options to protect and promote them. The area is now the focus of great power rivalry, largely centred on the crucial strategic resource for energy (oil and natural gas) which are threatened by the rising consumption likely to exceed the known reserves in the coming decades.