



EDITOR'S NOTE

Just before this issue of the Journal was readied for the press, the Centre for Air Power Studies (CAPS), in association with the Indian Air Force (IAF), and Confederation of Indian Industries (CII) organised the 11th in the series of an annual conference on Energising Indian Aerospace Industry. The sub-theme for the conference this year was "The Changing Environment". The inaugural address was delivered by the chief of the air staff and we carry it as the lead article. The air chief emphasised the need for rapid indigenisation and explained what the government and air force is doing to help bring it about. The address set the tone for a rather successful conference.

Cruise missiles that can fly under the radar to attack targets at long distances represent an important addition to a country's armoury. Modern cruise missiles are more capable and the high speed varieties pose an even more serious challenge to the adversary's air defence systems. The missiles can be launched from the air, ships, submarines and can be land-based as well. Now mobile containerised versions are also available. In our region, cruise missiles are proliferating and **Dr Manpreet Sethi** examines the role and impact of such a weapon system. She deliberates over the advantages that cruise missiles enjoy, the capabilities in this field of Pakistan and China, and the role they are expected to play in the military strategy of these countries. The section on imperatives for India is perceptive.

China continues to interest the global strategic community and its continued exhibition of brinksmanship has raised concerns in many countries. It is true that, since 1979, China has not militarily used the ever increasing might of the People's Liberation Army (PLA) but the continuing and rapid increase in diverse military capabilities has to be included in the security calculus of its neighbours and other possible adversaries. This does not imply

that other countries will be forced to accept Chinese dictates or that China militarily attacking another country is a probability in the near or mid-term, but such growth in military might should caution others and goad them into formulating plans and acquiring the wherewithal needed to combat possible Chinese designs. To do so, continued study of China is needed and this issue has three articles on differing aspects that impinge on the Chinese growing capabilities or intentions, and by inference, the likely Chinese designs.

In December 2015, the Chinese military underwent a major reform. One noteworthy change was the creation of a new independent Service. The erstwhile Second Artillery Force that operated as an independent arm of the PLA was given the status of an independent force and the title of PLA Rocket Force. China's military strategy has always relied heavily on its missiles and an independent Service gave it that status. The change is more than a mere change of name. The PLA Rocket Force will now control both types of missiles, conventional missiles and missiles that are nuclear tipped. The situation can cause some ambiguities in the minds of the targeted countries on the type of ordnance in flight, but as long as the doctrines and strategy of the targeted country are well reasoned, there should be no cause for any additional concern. **Gp Capt Chatwal** discusses the composition of the PLA Rocket Force, its bases, and suggests some measures that India should adopt to mitigate the impact of Chinese missile capability.

On November 23, 2013, China surprised the world by unilaterally establishing the Air Defence Identification Zone (ADIZ) that covered a major part of the East China Sea. The announcement was met with both surprise and chagrin, particularly as the Chinese ADIZ overlapped the Japanese ADIZ. The purpose was obvious as the Chinese ADIZ covered the Senkaku Islands that are claimed by China but administered by Japan. The announcement elicited many queries on the meaning of an ADIZ, its import, and whether China had the right to establish one. **Gp Capt Tanmay Sharma** looks at the concept of ADIZ, some historical issues, the rules that China expects others to abide by, and how some of the rules are over and above the rules stipulated by other countries for flights through their designated ADIZ. Will China establish an ADIZ in the South China Sea as well and for the same reasons?

It was widely believed that after the Permanent Court of Arbitration gave its award on the Philippines-China- South China Sea dispute, China would announce the new ADIZ. This has not happened but the author examines the issue in some detail to assess the viability of such a move and whether it will be in China's interest to make any such announcement. The arguments advanced make interesting reading.

The third article on China is by **Dr Temjenmeren Ao**. Taking a vastly different theme, the author discusses the soft power of China. Terms and phrases generally associated with China are far-sightedness, economic power, military prowess, aggressive behaviour, opportunism, etc but soft power is not spoken of too often. The author argues that the great economic progress made by China has also heightened the appeal of China in the minds of others but appeal based on economic gains can be transient. He briefly traces the history of China's economic progress and suggests that the Chinese government has recognised that a soft approach also has value and politico-cultural influences have a role to play. Yet, the lesser powers in the region are apprehensive of China's growing power and suspicious of Chinese plans, and these aspects attenuate the gains that Chinese soft power may be able to achieve.

The Indian region is prone to natural calamities. The Indian armed forces have often been called upon to render humanitarian assistance to beleaguered people. **AVM Rajesh Isser**, a serving officer with vast experience in providing Humanitarian Assistance and Disaster Relief (HADR), discusses the theory, planning and preparedness required for effective disaster management. The article is well reasoned and comprehensive. It is inevitable that nature will test us again and occasions will arise where humanitarian assistance becomes an urgent necessity. The author shows us the way forward and his views should form part of essential learning for those who may be called upon to undertake or plan HADR operations. In fact, the article can form the basis of policy formulation on the subject.

The production of Unmanned Aerial Vehicles (UAVs) is on the increase and so are the different types of missions to which they can be beneficially tasked. Although UAVs started as an option that could partially replace manned combat aircraft, their commercial value soon manifested itself. Commercial aspects often

dictate governmental policy. Hence, when it was decided that commercial and military aircraft could, with some care, use the same air space, a piquant situation was forecast where operators of UAVs would also ask to be allowed to use the same air space concurrently. Thus, was born the need to assess how UAVs could be allowed to operate in a common non-segregated air space. The challenges are many and a number of agencies are seeking solutions. **Gp Capt Narang** looks at the work done or being done in different countries, particularly the USA. He discusses the technological and regulatory challenges that are indeed daunting. It requires a near leap of faith to believe that human ingenuity can find solutions to some seemingly intractable problems but then humans have been known to find answers to what were once assumed to be impossible tasks.

History is always of interest, particularly as it gives a better understanding of how and why events occurred. Such information can then be extrapolated to the present and the future. **Wg Cdr Nijjar** has undertaken a study on helicopters. In an article in this issue, he describes the evolution of the helicopter force in India, from inception up to, and including, the helicopter operations during the 1971 conflict with Pakistan that led to the birth of Bangladesh. In a well-researched and well written article, the author shows how the helicopter force developed from very humble beginnings into a force to reckon with. The reader is left asking for more and the author will certainly cover the further history in subsequent issues of the Journal.

The last article is by **Jai Raina** on India's relationship with the nuclear Non-Proliferation Treaty (NPT). Jai is a young law student who interned with us for a month or so and effectively used the time to research into the subject and produce an article that we are happy to publish. If he continues to maintain the same level of scholarship, he has the promise to write many more articles of quality.



Happy reading.