

observers believe that regional arms control or arms reduction measures negotiated among the parties involved would be the most promising course of action. For example, the negotiation of a ban on ballistic missile flight tests is a potential method to curb proliferation.

More limited measures aimed at improving mutual confidence are also being explored. These include, *inter alia*, the sharing of data; notification of planned test flights; access to technical expertise and systems relating to false alarms and detection of missile launches; and, inspection visits.<sup>17</sup>

### CONCLUSION

The seriousness of the problem of ballistic missile proliferation lies not only in the fact that ballistic missiles can be used with weapons capable of causing great destruction, but also because many of the states acquiring them are deeply involved in political and military tensions and rivalries with other states.

The need to address the missile proliferation problem has already brought to the fore an initiative to limit their spread. While an important first step, the Missile Technology Control Regime as it stands today may not be sufficient to effectively address the situation. Other options must be explored and implemented if the dangers associated with ballistic missile proliferation are to be lessened and reversed. Needless to say, much work remains to be done, particularly since the root of the problem lies in the many sources of regional competition, rivalry and conflict.

### NOTES

- <sup>1</sup> Data about the range of ballistic missiles has been taken from: Aaron Karp, "Ballistic Missile Proliferation," *SIPRI Yearbook 1990: World Armaments and Disarmament*, Oxford University Press, Toronto, 1990, pp. 382-390. Data about accuracy and payloads has been taken from: Library of Congress, Congressional Research Service, "Missile Proliferation: Survey of Emerging Missile Forces," *CRS Report for Congress*, No. 88-642 F, Washington, Revised February 9, 1989, pp. 38-42.
- <sup>2</sup> CEP is calculated by the radius of a circle within which a warhead has a 50% chance of landing.
- <sup>3</sup> Quoted in "Wanted Worldwide: US Missile Technology," *The Christian Science Monitor*, 23-29 March 1989, p. 10A.
- <sup>4</sup> Aaron Karp, "Ballistic Missile Proliferation in the Third World," *SIPRI Yearbook 1989: World Armament and Disarmament*, Oxford University Press, Toronto, 1989, p. 287.
- <sup>5</sup> Aaron Karp, "Ballistic Missile Proliferation in the Third World," *SIPRI Yearbook 1989: World Armament and Disarmament*, Oxford University Press, Toronto, 1989, pp. 287-318; Aaron Karp, "Ballistic Missile Proliferation," *SIPRI Yearbook 1990: World Armament and Disarmament*, Oxford University Press, Toronto, 1990, pp. 369-391;

- Library of Congress, Congressional Research Service, "Missile Proliferation: Survey of Emerging Missile Forces," *CRS Report for Congress*, No. 88-642 F, Washington, Revised February 9, 1989; Martin S. Navias, "Ballistic Missile Proliferation in the Middle East," *Survival*, May-June 1989, pp. 225-238.
- <sup>6</sup> Duncan Lennox, "The Global Proliferation of Ballistic Missiles," *Jane's Defence Weekly*, 23 December 1989, p. 1384.
- <sup>7</sup> Jane Hunter, "Israel and South Africa: Cat out of the Bag," *Middle East International*, 3 November 1989, pp. 11-12.
- <sup>8</sup> Steven Zaloga, "Ballistic Missiles in the Third World: Scud and Beyond," *International Defense Review*, November 1988, p. 1425.
- <sup>9</sup> Michael Eisenstadt, "The Sword of the Arabs:" *Iraq's Strategic Weapons*, Policy Papers No. 21, Washington Institute for Near East Policy, 1990, p. 21.
- <sup>10</sup> Robin Wright and John Broder, "Iraqis test-fire chemical warhead," *Toronto Star*, 15 September 1990, p. 8.
- <sup>11</sup> "Iran is Said to Try to Obtain Toxins," *New York Times*, 13 August 1989, p. 11, and "Armes chimiques: l'Iran aurait tenté d'acheter des toxines au Canada," *Le Devoir*, 14 August 1989, p. 2.
- <sup>12</sup> Leonard Spector, *Going Nuclear*, Ballinger Publishing, Cambridge, 1987, pp. 150-151.
- <sup>13</sup> Steven Zaloga, *op. cit.*, p. 1427.
- <sup>14</sup> Canada, Department of External Affairs, "Control of Transfer of Missile Technology," *Communiqué* No. 69, 16 April 1987, and "Guidelines for Sensitive Missile-Relevant Transfers" and "Equipment and Technology Annex" (Attachments to *Communiqué* No. 69).
- <sup>15</sup> Canada, Department of External Affairs, "Control of Transfer of Missile Technology," *Communiqué* No. 69, 16 April 1987, and "Background Paper: Missile Technology Control Regime: Questions and Answers" (Attachment to *Communiqué*, No. 69).
- <sup>16</sup> *Ibid.*, pp. 4-5.
- <sup>17</sup> Many proposals for confidence and security building measures have been advanced by Gerald M. Steinberg. See Gerald M. Steinberg, "The Middle East in the Missile Age," *Issues in Science and Technology*, Summer 1989, pp. 35-40.

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