English Channel, or North Atlantic would "fill the gap" between forward-deployed systems and U.S.–based midcourse systems for homeland security.[38] Moreover, recent studies indicate the threat to expeditionary and peace-support forces may be greater from cruise missiles and unmanned aerial vehicles (UAVs) than from ballistic missiles, in so far as both could be made available to a spectrum of unsophisticated adversaries, ranging from rogue states to drug lords and terrorists.[39] But again, the need for a missile shield in regional and theatre settings far exceeds the urgency of NMD.[40]

In a larger, "layered" missile defence system the early warning sensors of TMD could in principle be the first layer of a globally integrated surveillance system. Data from widely dispersed radar installations and space sensors can, after all, be used to provide accurate tracking of any flying object. John Steinbruner has noted that the United States and its allies are for the time being the only countries with the technology and financial resources required to undertake the building of such a global surveillance system, which means that they are also in a position to dictate its purpose.[41] Research in the early warning aspects of missile defence holds out the political promise of transparency and confidence-building among potential adversaries. Spaced-based surveillance assets are particularly intrusive. "At some point on the spectrum of development not far from what has been accomplished already," Steinbruner points out, "the degree of intrusiveness will introduce new forms of military interaction that will generate new principles of security." [42] The objections of emerging missile states to global surveillance can be allayed by making them beneficiaries of it. Global surveillance therefore has considerable potential as a confidence and security building mechanism. The signatories of the MTCR should embrace TMD for the purpose of ensuring multilateral intervention operations, while promoting diplomatically the development of a ground and space global surveillance integral to NMD for the purpose of enhancing transparency among states with ballistic missile capabilities. The acceptance or rejection of global surveillance among the emerging missile states could indeed more accurately sort out the "rogues" from the states which have developed missiles solely for defensive and deterrent purposes.

Some sensors are common to a wide variety of civil and military programs now in development, while others are unique to missile defence. A forward-deployed ground-based radar such as X-band radar is multi-functional and supplies target tracking data. High frequency and advanced radar add detailed information in order to distinguish missile warheads from decoys. Upgraded early warning radars (UEWR) are fixed phased array radars capable of detecting and tracking missiles in mid-flight prior to cuing the more accurate X-band. Space-Based Infrared Systems (SBIRS), by contrast, give a missile defence system an over-the-horizon capability to detect a launch long before a ground-based radar can do the same. The point here is that sensor technology for detecting and tracking is diverse and advancing rapidly, while sensor technology for interception is less diverse and less mature. Those who doubt the viability of missile defence doubt above all the reliability of the intercepting kill vehicle, but sensors are make-or-break component of any missile defence system.[43]

The idea of global surveillance is not new. The first Bush administration proposed a program for Global Protection Against Limited Strikes (GPALS) in 1991. The GPALS program is now obsolete, but the notion of global surveillance for security against WMD deliverable by missiles remains attractive, due particularly to the problem of proliferation. The prospect of terrorist organizations and the states which host them employing crude ballistic missiles has heightened interest in global surveillance and in international cooperation in the pursuit thereof. Russia, a state guilty of both deliberate and inadvertent proliferation yet equally troubled by terrorists and rogue regimes armed with missiles could play a pivotal role in this regard.[44] At present collaboration between the United States and Russia is represented by the Russian-American