

Ukraine and Lessons for War with China



Ukraine and Lessons for War with China

History

Kiev founded in 882.

Moscow founded in 1147.

Most of Ukraine incorporated by Russia in the 18th century.

Russia annexed Crimea in 1783.

Ukraine's blue and yellow flag adopted in 1848.

The Ukrainian Soviet Socialist Republic started in 1919. The Holodomor was inflicted on Ukraine in 1932-1933, killing some seven million to crush resistance to collectivisation.

Ukraine was a founding member of the United Nations in 1945.

Krushchev transfers Crimea to Ukraine in 1954.

Soviet Union falls apart in 1991.

In 1994 Ukraine gave up its 1,900 nuclear warheads under the Budapest Memorandum.

Maidan Square protests began in November 2013 and led to the overthrow of the then Ukrainian government – likely organised by Victoria Nuland of the US State Dept.

Russia annexes Crimea in 2014 and starts wars in Donbas and Luhansk.

Russia invades Ukraine on 24th February, 2022.



Putin's Casus Belli

"On the Historical Unity of Russians and Ukrainians" is an essay by Russian president Vladimir Putin published on 12 July 2021.

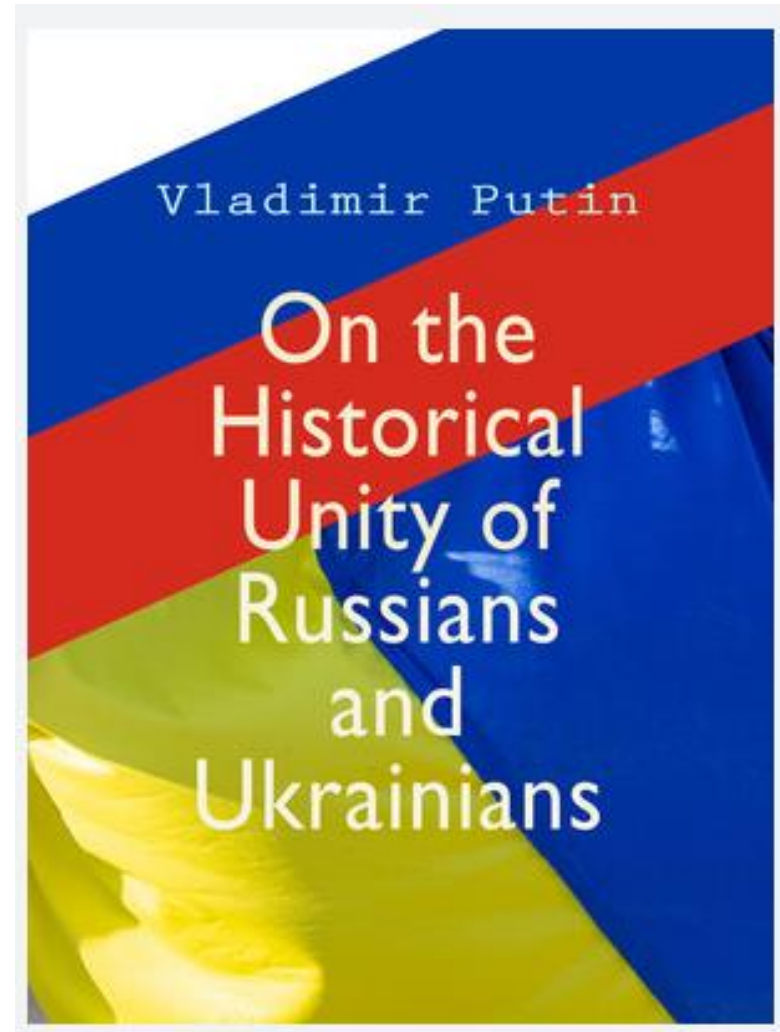
In hindsight, this 5,000 word essay is Putin's moral case for the war and that war was inevitable.

Putin expected a three day war and for Russian troops to be greeted as liberators.

Some of the first trucks across the border had riot gear.

Russian Air Force paratroopers at Hostomel Airport landed with their parade uniforms.

But some in Russian intelligence were aghast and fed US intelligence the Russian war plans.



Ukraine War – The Early Lessons

1. The Russian armed forces are culturally vulnerable to deception.
2. Survivability depends on dispersing ammunition stocks, command and control, maintenance areas and aircraft.
3. Russia started out with a 2:1 advantage in artillery and this reached 10:1 in June 2022 as Ukrainian ammunition stocks became exhausted.
4. Precision is not only vastly more efficient in the effects it delivers but also allows the force to reduce its logistics tail and thereby makes it more survivable.
5. Survivability is often afforded by:
 - a. Being sufficiently dispersed to become an uneconomical target
 - b. Moving quickly enough to disrupt the enemy's kill chain and thereby evade engagement.
 - c. Or by entering hardened structures.

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6. The average life expectancy of a quadcopter remained around three flights, of a fixed-wing UAV was around six flights.
7. Russian artillery would tend to operate in batteries a third of their range behind the forward line of own troops (FLOT), with a spacing of 100–150 m between their guns.
8. Russian units with their own UAVs could deliver highly responsive fires, bringing effect to bear within 3–5 minutes of target detection.
9. For targets that ran through a fire-control headquarters, the Russians continued to add new detections to the bottom of the list and prosecute strikes in order, leading to fire missions taking 20–30 minutes at the tactical level, and around 48 hours at the operational level.



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11. The Russians rarely displaced after firing unless they received fire. This appears to have been because the volume of shells they needed to fire their missions could not be displaced or repositioned quickly, even if the guns could.
12. Russian units continued to seek to execute their orders long after it had become apparent that assumptions in those orders were wrong. Until an order is countermanded commanders will continue to try to execute their last instruction.
13. Russian aviation, shot down over Ukraine, has been found on more than one occasion to have its radar in the stowed position, with safety covers over primary sensors - indicative of complacency and poor ground crew training.



Russian Su-35 shot down in Ukraine

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14. Fratricide is a systemic issue between Russian systems. For example, the Khibiny EW pod, mounted to a number of Russian aircraft, automatically detects radars and disrupts them. Unfortunately for the Russians, it tends to also do this to other Russian aircraft. Pairs of Russian strike aircraft mounting this system have therefore had to choose between having a functional radar or EW protection. They have often been ordered to prioritise their radar.



Khibiny EW pods installed on the wings of two Flankers

Dispersion and Survival

1. There is no sanctuary. The first clear lesson from the war in Ukraine is that the enemy can conduct strikes on targets throughout its adversary's operational depth with long-range precision fires.
2. For the air force, it was found that the ability to conduct dispersed operations was critical to survivability. Without this capability it is likely that the air force would not have survived the opening days of the conflict.
3. The Ukrainian Ground Forces similarly found that long-range precision strikes were used against their stockpiles, against training establishments and maintenance facilities when these were identified.



Ukrainian Su-27 after practicing dispersed operations in August, 2020

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4. Maintenance facilities had to be situated a long way from the front and dispersed, not because distance assured protection, but because increasing the space over which the enemy had to search for them improved survivability.
5. The reduction in the logistical tail and therefore reduced vulnerability of precision systems is perhaps as important as their effect in terms of their superiority to non-precision fires.



US Army's M978 heavy tactical fuel truck – 9,500 litre capacity

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5. For the most part, the Russian missile systems are reliable and accurate. Cruise missiles can be intercepted, but the Russians routinely adapted flight routes for every mission and such missiles were observed to make up to 80 changes of course on their way to a target.



- Kalibr cruise missile
- 450 kg warhead
 - 300 km range
 - Submarine, air or ground launched

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6. Russian ballistic missiles meanwhile – notably Iskander 9M723 – fly in a quasi-ballistic trajectory and launch six decoys that significantly alter their radar cross section and targetability.



Iskander missile on Transporter Erector Launcher

- 500 km range
- 700 kg warhead
- Single stage, solid fuel
- Mach 5.9 burnout velocity
- 30 metre accuracy
- Russia used 839 with 119 left as at November 2022
- Production rate of 64/year

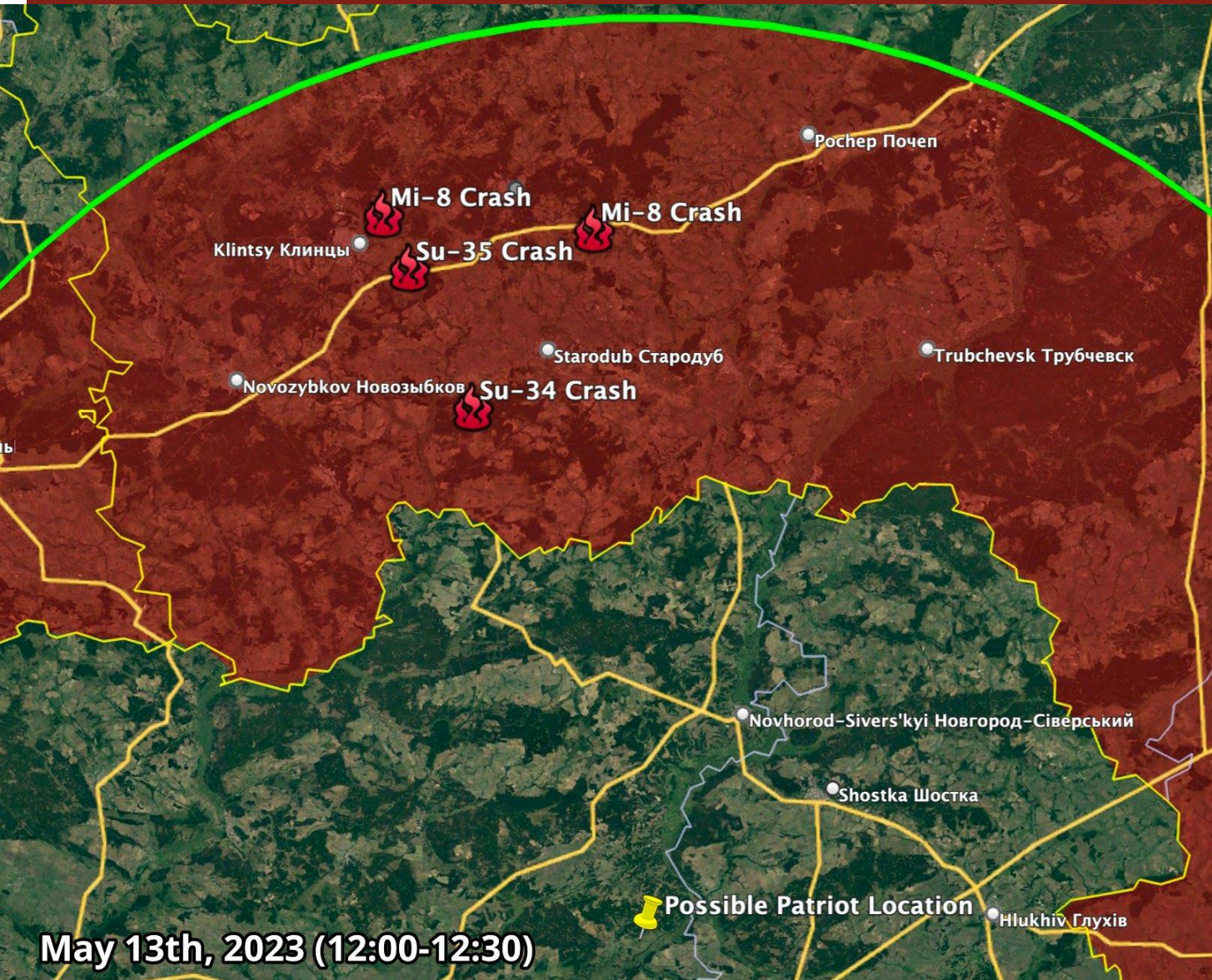
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Penetration aid for an Iskander ballistic missile.

Didn't work against a Patriot battery in Kiev at 3.00 am on 14th May. Russia fired 18 missiles to arrive within a two minute period – 6 Kinzhal, 9 Kalibr cruise missiles, 2 Iskander and 1 S-400. All were shot down. The previous week a Patriot battery shot down 4 aircraft in the Bryansk region of Russia 70 km from the border – two Mi-8 EW helicopters, an Su-34 and an Su-35. Nine crew died.

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May 13th, 2023 (12:00-12:30)

David Archibald

The Bryansk Patriot ambush

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Eight of the nine killed.

The Russian Air Force stripped all of the training establishments, then they also stripped the academies, and finally gave all of the students junior officer commissions so they could deploy them.

On the subject of penetration aids

Miniature Air Launched Decoy



Length: 2.84 meters (9 feet 7 inches)
Wingspan: 1.71 meters (5 feet 7 inches)
Weight: 115 kilograms (250 pounds)
Speed: Mach 0.91
Ceiling: 12,200 meters (40,000 feet)
Range: 920 kilometers (575 miles)
Endurance: 45 minutes
Unit cost: US\$322,000

US\$2,800/kg

MALD in Luhansk on 12th May
Accompanying Storm Shadow

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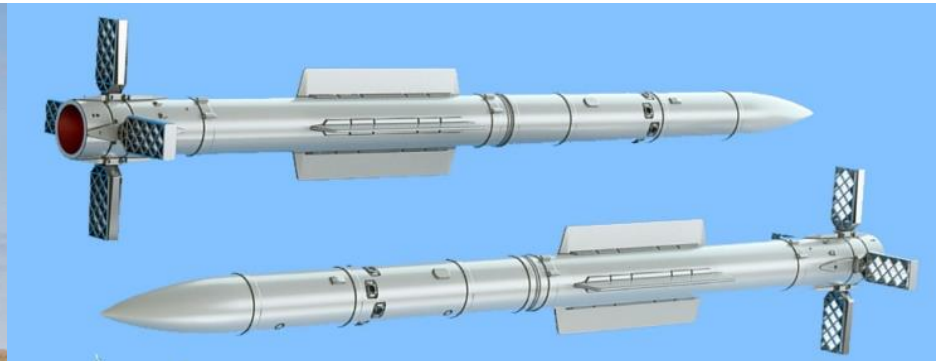
The Air War

1. Ukrainian fighter aircraft were both totally technologically outmatched and badly outnumbered.
2. Russian fighters have remained highly effective and lethal against Ukrainian aircraft near the frontlines throughout the war, especially the Su-35S with the R-77-1 long-range missile and, in recent months, the Mig-31BM with the R-37 very long-range missile.



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Su-35



R-77-1 radar-guided missile
110 km range

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Mig-31

- First flew 1975
- Maximum speed of Mach 2.8 at 70,500 feet
- Combat range 1,450 km
- Production ended 1994
- 519 built
- Longest range kill 177 km



R-37

- Developed in the late 1980s
- Range 400 km
- Weight 600 kg
- Maximum speed 7,400 km/h
- Midbody strakes
- Russia has been firing up to six per day

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3. Throughout the war, Russian fighters have frequently been able to achieve a radar lock and launch R-77-1 missiles at Ukrainian fighters from over 100 km away.
4. Russian ground-based air defence has also been highly effective since March, especially the long-range S-400 SAM system supported by the 48Ya6 'Podlet-K1' all-altitude long-range surveillance radar system.

48Ya6 Podlet-K1

- S band
- 600 km range
- April 2018



The 48Ya6 Podlet-K1 deserves a lot of respect. From this report:

Regenerating Warfighting Credibility for European NATO Air Forces

This sentence on page 30:

To give an idea of the threat, Ukrainian fighter pilots have been shot down while flying at altitudes as low as 15 ft by SA-21 SAMs fired from over 150 km away, enabled by active-seeker terminal guidance on the missile itself coupled with launch-cueing and mid-course guidance from a 48Ya6-K1 'Podlet' all-altitude radar relayed through the standard SA-21 battalion 55K6 command vehicle.

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5. The most effective Ukrainian SAMs against Russian fixed-wing aircraft have consistently been SA-11 'Buk' systems operating transporter-erector launcher and radar vehicles as individual pop-up threats rather than as formed batteries.



First service
1980

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6. Russian close air support efforts have generally been limited to low-level unguided bombing runs and unguided rocket barrages, which have failed to inflict decisive damage on Ukrainian ground forces and have led to sustained losses to MANPADS among the Su-25 and Su-34 fleets.
7. On the other hand, Russian high-altitude fighter CAPs with Su-35S and more recently with Mig-31BM interceptors are continuing to shoot down significant numbers of Ukrainian ground attack aircraft near the frontlines from distances that render them all but immune to return fire.



Russian helicopter shoot down
March 2022

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8. From 24 February to the end of May, more than 2,000 3M-54 Kalibr, Kh-101, Kh-55, Kh-555 and other cruise missiles were fired into Ukraine, usually in salvos of 4–12 at a time. Around 240 Iskander missiles were fired at 160 targets.
9. The Russian targetting protocol for cruise missiles had a 48 hour OODA loop. They would often hit an empty location.
10. The accuracy of the Shahed-136 is sufficient to produce multiple hits on a single building, and the Shahed-136 can also bank to circle around a target upon arrival to perform a steep (>70-degree) terminal dive from a specific bearing programmed before launch.



Shahed-136

Pusher propeller, piston engine.
Cruise speed of 185 kmph.
Unit cost of possibly US\$50,000.

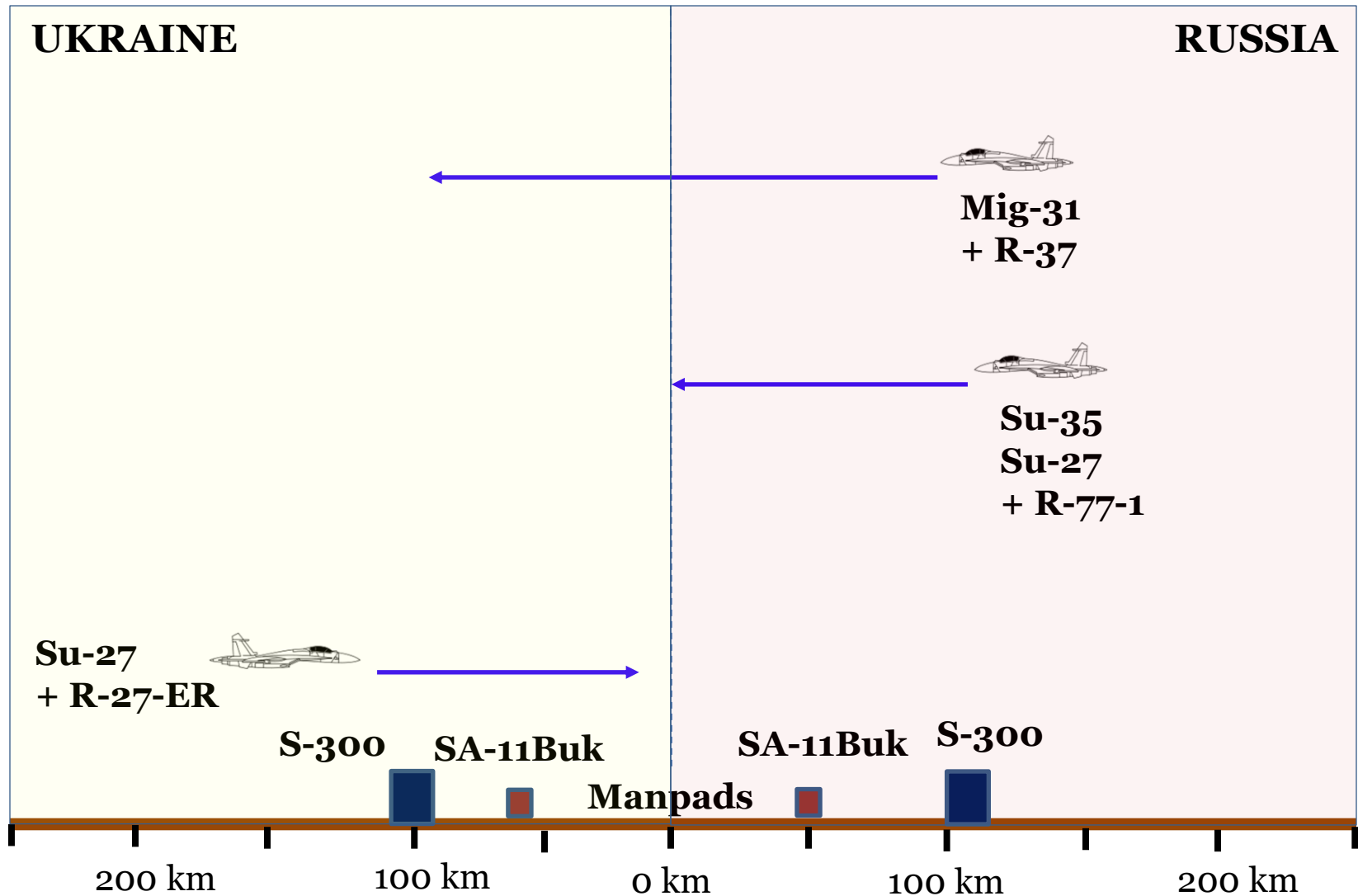
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Shahed-136 warhead with shaped charges.

Ukraine has lost two fighter aircraft due to their engines ingesting debris from a Shahed-136 they had shot down.

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When almost all missiles missed, in both directions:

Operation Allied Force against Serbia in 1999

1. The Serbians fired **815 SAMs** at NATO aircraft, downing one F-16 and one F-117 and damaging a second F-117. This is a 0.36% success rate.
2. NATO fired **743 HARM** anti-radiation missiles at SAM sites. Of the 389 HARMs fired at SA-6 batteries, three succeeded in destroying the SAM battery. This is a 0.77% success rate.

Lesson: Fixed air defences crippled but mobile air defences survived, same as in Ukraine

Two of Serbia's three static S-75 Dvina / SA-2 Guideline SAM battalions and 70 percent of their static S-125 Neva / SA-3 Goa SAM sites were destroyed as compared with only three of their 22 mobile SA-6 Gainful SAM systems.

SA-6 Gainful



The kill marks of a Ukrainian S-300



- 22 cruise missiles
- 9 helicopters
- 1 Su-27
- 6 Su-25
- 3 Orlan UAV
- 9 Geran loitering munition
- 3 Mohaher-6 UAV

Current Russian Operational Doctrine as at May 2023

Infantry

Russia's attack in February was based on Battalion Tactical Groups. These had insufficient infantry and were defeated.

Russia now has four infantry unit types: disposable; line; assault; and specialised.

Prisoner and conscript troops appear to be under the influence of amphetamines or other narcotics. Under threat of being shot for retreating, they find points of weakness in the Ukrainian defences where these troops make surprising amounts of progress or face very limited fire. Alternatively, where the defence is strong, the revelation of Ukrainian firing positions allows specialised troops to begin targeting them.

152-mm howitzers fire until the assault is 400 m from the target position, after which fire is taken over by 122-mm howitzer or 120-mm mortar fire until the assault closes to its final assault positions. The final advance is covered by infantry mortars and then grenades are used before entering the target position.

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Once Russian troops have taken a position, it is reliably fortified within 12 hours through the digging of fox holes or blasting on less favourable ground.

It is typical for there to be between 25 and 50 UAVs from both sides operating over the contested area between the forward line of own troops (FLOT) and forward line of enemy troops (FLET) at any given time for each 10 km of frontage.

In theory, their poor morale should make Russian units brittle. In practice, they appear to be able to take very heavy punishment without collapsing.

Artillery

Russian ammunition expenditure in 2022 was approximately 12 million rounds, fluctuating between 20,000 and 60,000 rounds fired per day, Russian fires in 2023 are currently trending closer towards 7 million rounds.

Russia can produce 2.5 million artillery rounds per annum.

As at April 2023, the US is producing 20,000 155 mm shells per month, up from 14,000 last year.

At full capacity, the Rheinmetall NIOA plant in Maryborough will be able to produce up to 8,500 155mm shells per month on three shifts.

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When you have shot too many shells

The last one blows the barrel.

Russian MSTA-SM2

Tanks lose accuracy through barrel wear.



The Russian Intelligence-Reconnaissance-Strike Complex



The Orlan drone finds targets for the:



**Lancet kamikaze drone
- unnecessarily large radar cross section**

Armour

Russia has largely given up using tanks in assault. They are now used in three ways:

1. Indirect fire when there is not enough artillery.
2. Fire support at 2 km stand-off range and beyond the reach of ATGMs.
3. Raiding of Ukrainian positions during troop rotations.

Russia is reducing the thermal signature of its tanks by:

1. Fitting anti-thermal material.
2. Reducing the heat plume from the engine deck.
3. Operating at dusk and dawn during thermal crossover.

Russian explosive reactive armour (ERA) has proven highly effective.

Ukrainian tankers report that mobility kills against a tank's tracks are also an effective means of removing Russian armour from the field because they usually cause the crew to abandon the tank.

Electronic Warfare

The AFRF now employ approximately one major EW system per 10 km of frontage, usually situated approximately 7 km from the frontline, with more specialised EW capabilities sat at higher echelon. This is primarily an anti-drone role and also blocking of GPS signals.

Another function of Russian EW troops is interception and decryption of Ukrainian military communications. When not intercepting traffic they are able to suppress Motorola radios up to 10 km from the front line.

Counter-drone EW systems are distributed down to the platoon level.

Command and Control

Ukrainian GMLRS has pushed Russian command posts to 20 km from the front. These are linked by ground-laid telecoms cables, usually laid within 24 hours of a command post being established.

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The Russia-Ukraine War has vindicated air power theory:

- The larger force in terms of size and technology will prevail.
- The air war will last three days.
- To determine the size of your air force after the air war, calculate how many you will lose due to the loss/exchange rate using Lanchester equations.
- Longer range air-to-air missiles will push away the enemy's aircraft.

Country	Missile	Weight	Range
Russia	R-77-1	190 kg	110 km
	R-37	600 kg	400 km
Ukraine	R27R/ER	253 kg	100 km
China	PL-15	230 kg	145 km
US	AIM-120D	160 kg	160 km
Germany	Meteor	190 kg	200 km+

The Meteor costs €2 million
- equates to A\$3.1 million
- A\$16.45 per gram
- A\$1.13 per gram for silver
- A\$87.33 per gram for gold

The solutions to effective enemy SAM systems:

1. Yom Kippur solution – overrun the SAM sites with armour to enable the air force to operate.
2. Miniature Air-Launched Decoy (MALD) - overwhelm with decoys mimicking allied aircraft to deplete their magazines.
3. Leave targetting of enemy assets behind the front line to cruise missiles and long range artillery, using cluster munition warheads to avoid the need for precision to achieve effects.

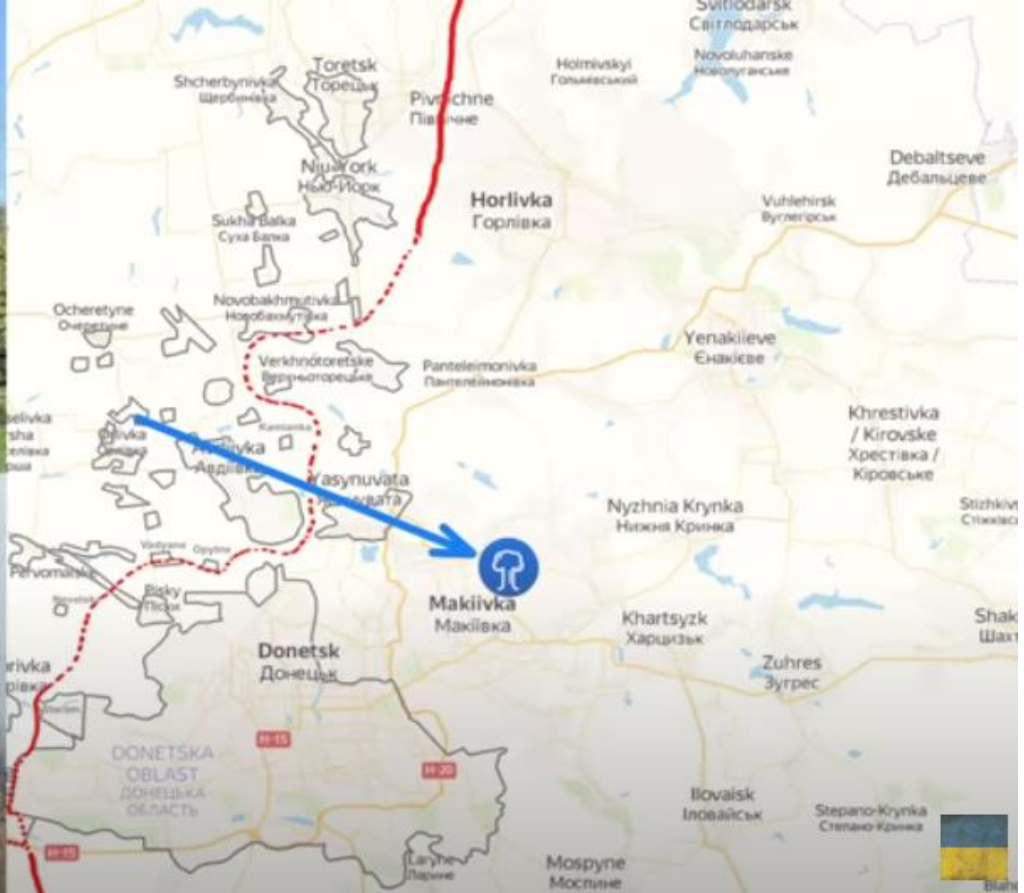
The important thing is to have a solution that costs less than the enemy SAM systems.

The solutions to enemy drones:

1. An integrated net of millimetre radars with microwave and laser beams such as the Skylock system.
2. Point protection against kamikazi drones such as the Lancet using Active Protection Systems such as Trophy.

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No Sanctuary



On 1st January 2023, a HIMARS strike on a Russian base at Makiivka reportedly killed 500 Russian troops with a further 100 wounded. Cost-effective at US\$1,200 per killed/incapacitated Russian.

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What is best in tube artillery systems?

The experience of the Ukraine War is that utility is:

Wheeled > Tracked > Towed

The Ukrainian experience is that artillery fire is quickly subject to counter-battery fire so that wheeled or tracked is better than towed.

The tracked systems in the Ukraine, including the German Panzerhaubitze 2000 and the Polish/Korean Krab, are having a lot of downtime for maintenance and are much slower on the ground than the wheeled systems which can drive to maintenance depots under their own power.

French Caesar 155 mm
wheeled howitzer



Drones Directing Artillery

A standard platoon defensive position normally took 60 to 90 artillery rounds to destroy.

But with drone-guided fire this was reduced to just 9 rounds.

Drones had been supplied to all Ukrainian artillery units.

This suggests an improvement of a factor of 7-10.

Which is roughly what we see in the ratios of artillery shells:casualties.

A Russian take:

Ukrainian artillerymen usually fire 'in bursts' of 2-3 shots, a 3 – 4 minute pause to make corrections then again 4 – 6 shots to finish them off.

As a rule there are no more than three such series.

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Also, several weeks ago, Russians were reportedly relocating their 70-year-old T-55 tanks in

Russia has pulled T-55 tanks out of storage in Siberia. The prototype was produced in 1945 so now close to 80 years old. Likely use is field artillery, not leading assaults.

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ago, the senior priest of the Trinity Cathedral in the city of Kurgan conducted a ceremony

Early on the Russians lost a lot of trucks due to low quality Chinese tyres.

They are now mobilising civilian vehicles. The van is being blessed on its way to battle.

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The Spiritual Battle

Ukrainian Orthodox priest blessing a HIMARS launcher

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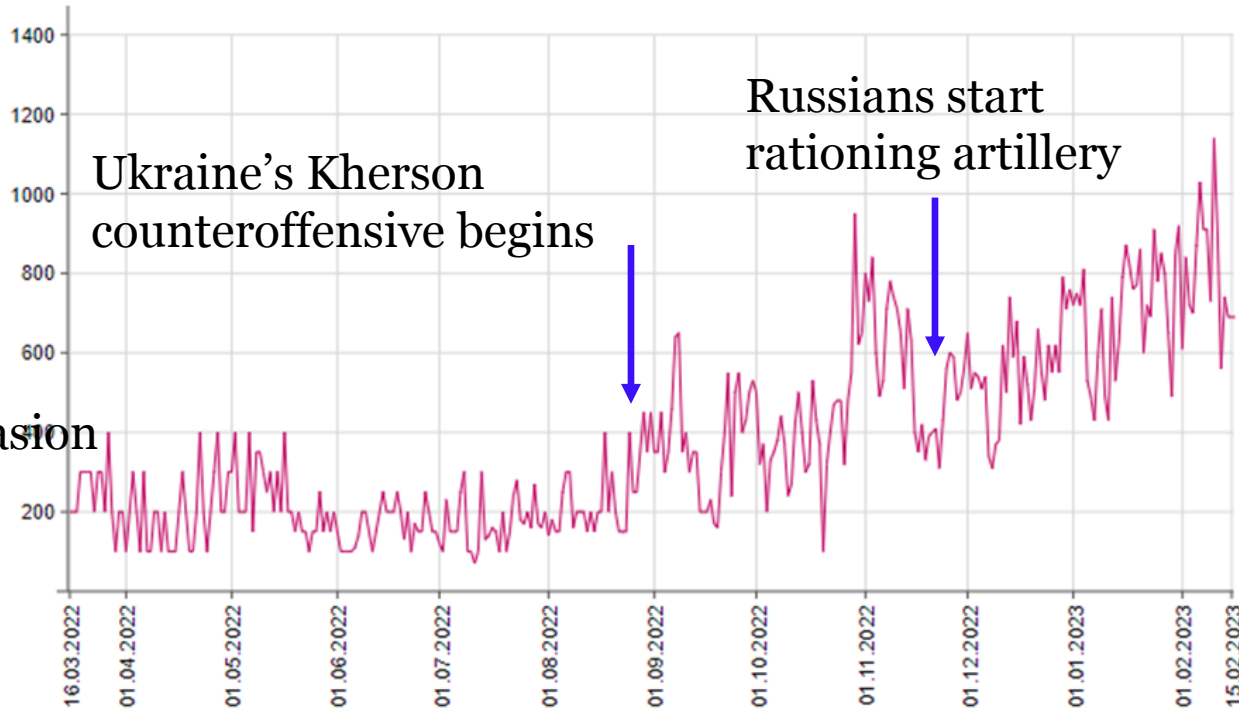


No forklifts in the Russian Army

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Dynamics of losses of the Russian army:

Military personnel entire period by days



The Russian killed to wounded ratio is 1: 4.8, and possibly as bad as 1: 2.

The Ukrainian killed to wounded ratio is 1: 7.3 due to better treatment in the field.

Russian casualties are now running at about 300,000 per annum.

The Russian military is bashing itself to death in Ukraine – no second front in the war with China.

The Legacy of the Yom Kippur War in 1973

US post-war inspection of the battlefield was impressed by two things:

1. Egyptian and Syrian Russian-supplied SAMs shooting down Israeli ground attack aircraft.
2. The speed of the armoured advances and the consumption of war stocks.

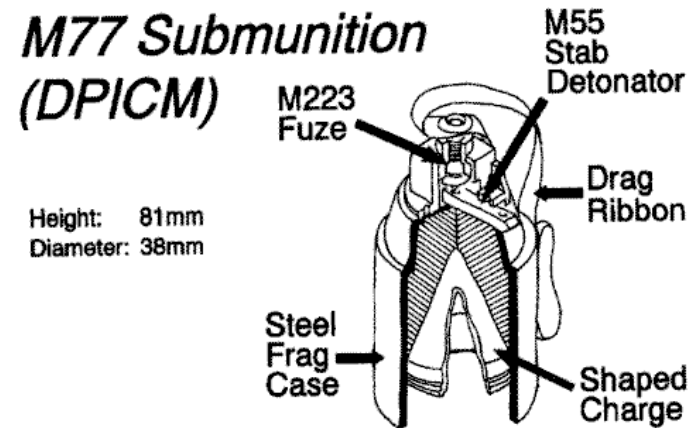
That resulted in three developments:

1. Adoption of Suppression of Enemy Air Defense (SEAD) first as the overarching principle of air warfare – which means take out the enemy SAM sites first.
2. Development of the HIMARS system as an assault breaker weapon.
3. Adoption of the AirLand Battle concept as its warfighting doctrine. This is close coordination between the Army and Air Force to produce an integrated attack plan that would use the land forces in a counter-blitz while air power, artillery and special operation forces stopped the movement of enemy reserves toward the front line. The result would stretch out the Warsaw Pact's advance in time, allowing the smaller NATO forces to continually attrit the enemy all along the battlefield while the reinforcements arrived piecemeal. Worked in Desert Storm.

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HIMARS – High Mobility Artillery Rocket System

1. Started out as the tracked M270 with 12 missiles in 1983.
2. The first missile, the M26, had a range of 32 km, unguided, warhead of 644 M77 DPICM (Dual Purpose Improve Conventional Munition) bomblets.
3. Each missile's bomblets covered an area 200 metres in diameter which is 31,400 m², one per 48 m². Which is a radius of 4 metres.
4. The shaped charge can penetrate 4 inches of armour. It is also anti-personnel.
5. Then cluster munitions went out of fashion and there are now two warheads – Unitary with 27 kg of high explosive in a 90 kg warhead and Alternative Warhead (AW) with 160,000 preformed tungsten pellets.
6. But the AW variant has a lethal range of only 50 metres and thus has one fourth the effect of the cluster bomb variant, and little effect on armour.
7. Called “steel rain” in the 2003 Iraq war.



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Multiple Launch Rocket System M270

Two pods of six missiles each or
two ATACMS missiles with a range of
300 km
Early range was 30 km.



High Mobility Artillery Rocket System M142

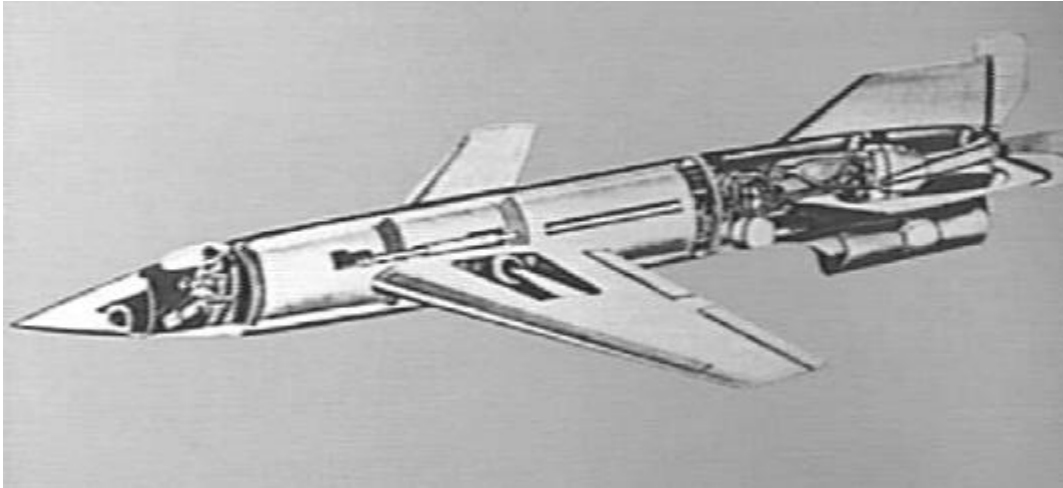
One pod of six missiles
Fits on a C-130
M31 missile has 91 kg unitary
warhead
M30A2 missile with warhead of
160,000 pre-formed tungsten pellets

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7. Latest suggestion is combining the rocket motor of the M30 with the Small Diameter Bomb (SDB) to create a gliding munition with a range of 150 km.
8. The SDB was originally developed for the F-35B because it couldn't take off with full-sized bombs.
9. The SDB has only 23 kg of high explosive in 93 kg total weight.
10. Ultimately the most cost effective way of delivering high explosive on the battlefield will be a glide warhead and rocket motor designed as one package.
11. With the warhead delivering cluster munitions to destroy troops and armour.
12. The best opportunity to cost-effectively outrange the enemy's tube artillery.
13. No need for a special vehicle – gliding and range means that the missiles can be fired from a 20 foot container on the back of a tactical truck.

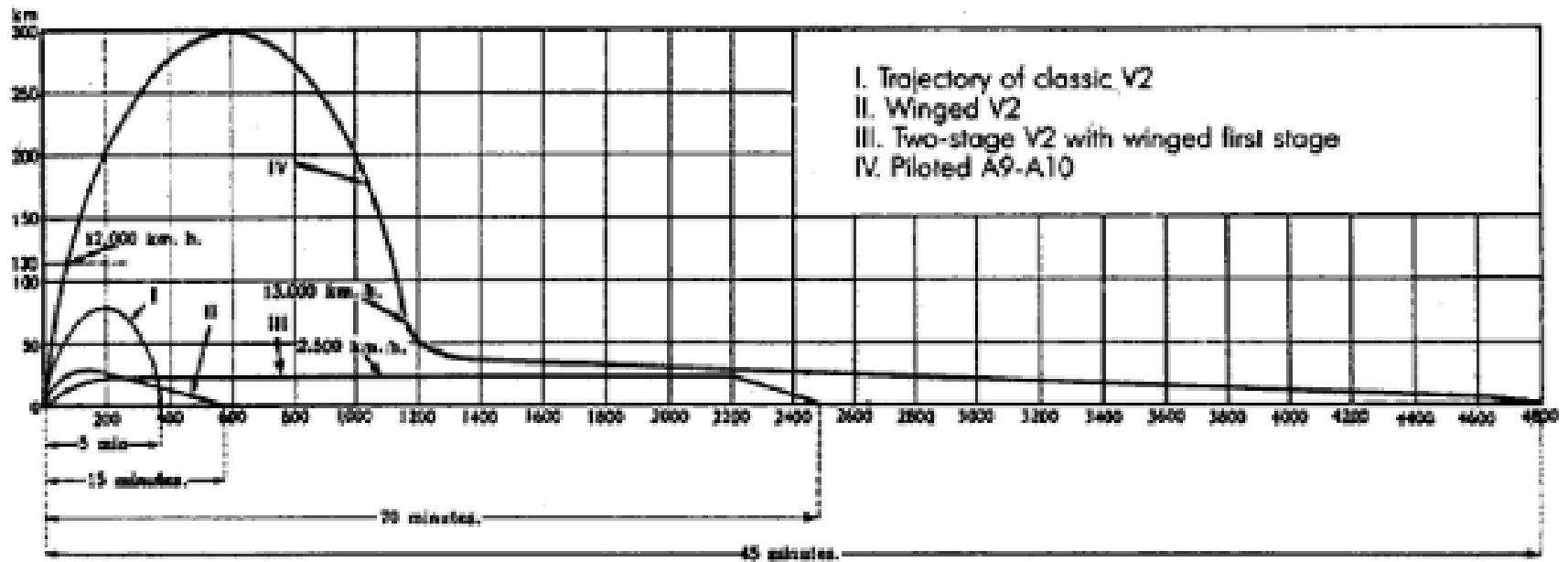


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Rocket-boosted glide weapon

- of course the Nazis thought of it first
- Launched the world's first hypersonic, winged, glide missile on 25th January, 1945



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Basic data for M85

Country of origin	Israel
Manufacturer	Israel Military Industries (IMI)
Type	DPICM
Diameter	42 mm
Length	82 mm excl. ribbon (56 mm stacking height)
Weight	292 g
Explosive content	44 g RDX
Delivered by	e.g. 155 mm artillery projectile (M396)
Number per carrier	49 (in M396)
Dispersion area	Circle up to 100 m radius/3 ha
Impact velocity	40 m/s
Angle of impact	80 - 90°
Casing properties	13 steel rings, prefragmented 3 mm thick. Aluminium liner of 2 mm inside.
Number of fragments	~1200



Twitter quote:

Cluster munitions are the tool of militaries serious about fighting a war.

That is why Ukraine went to Turkey to get 155mm cluster munition artillery shells when the Biden Administration turned Zelenksy down.

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Excelsior 155 mm round used in Ukraine with a range of 50 km at US\$70,000 per Shell.



General Atomics is developing the Long Range Maneuvering Projectile (LRMP) which is a 155 mm round that deploys carbon fibre wings at apogee and achieves a range of 150 km.

The force on an artillery shell is up to 10,000 g in the barrel.



Lessons from the Ukraine War

1. Land warfare is artillery – shells and missiles.
2. Tanks are necessary.
3. Infantry fighting vehicles (IFV) are necessary.
4. Tanks and IFVs need Active Protection Systems such as Trophy.
5. Dispersion is needed for survival.
6. Decoys soak up enemy ordnance.
7. Electronic warfare means that GPS needs inertial navigation system backup.
8. Precision reduces the size and thus vulnerability of the logistic tail.
9. Wheeled artillery is better than tracked is better than towed.
10. Cluster munitions are more effective against infantry than unitary rounds.
11. Systems countering drones need to be less expensive than the drones they are shooting down.
12. A operational reserve is necessary in order to be able to make the transition from attrition warfare to envelopment by manoeuvre.
13. Drones need to be defeated by a radar/optical system tied to directed energy systems – microwave and laser with 25 mm canon backup.
14. Don't get rid of your old tanks.
15. Helicopters and ground attack aircraft are too vulnerable to be worth having.

The War with China

1. China wants to be seen as the No 1 country on the planet.
2. To do that they need to displace the US.
3. We would have had the same problem if the Nationalists had won in 1949.
4. Xi Jinping turns 70 in June 2023– so when will he have his war?
5. But which country to attack?
6. China hasn't laid much concrete for an attack on Taiwan.
7. But has laid plenty of concrete for an attack on Vietnam.
8. Vietnam's 30+ bases in the Spratley Islands makes a mockery of China's claim to all of the South China Sea.
9. Vietnamese soldiers on those islands have been told they will be fighting to the death.
10. China has been attacking Vietnam for 2,100 years starting 111 BC.

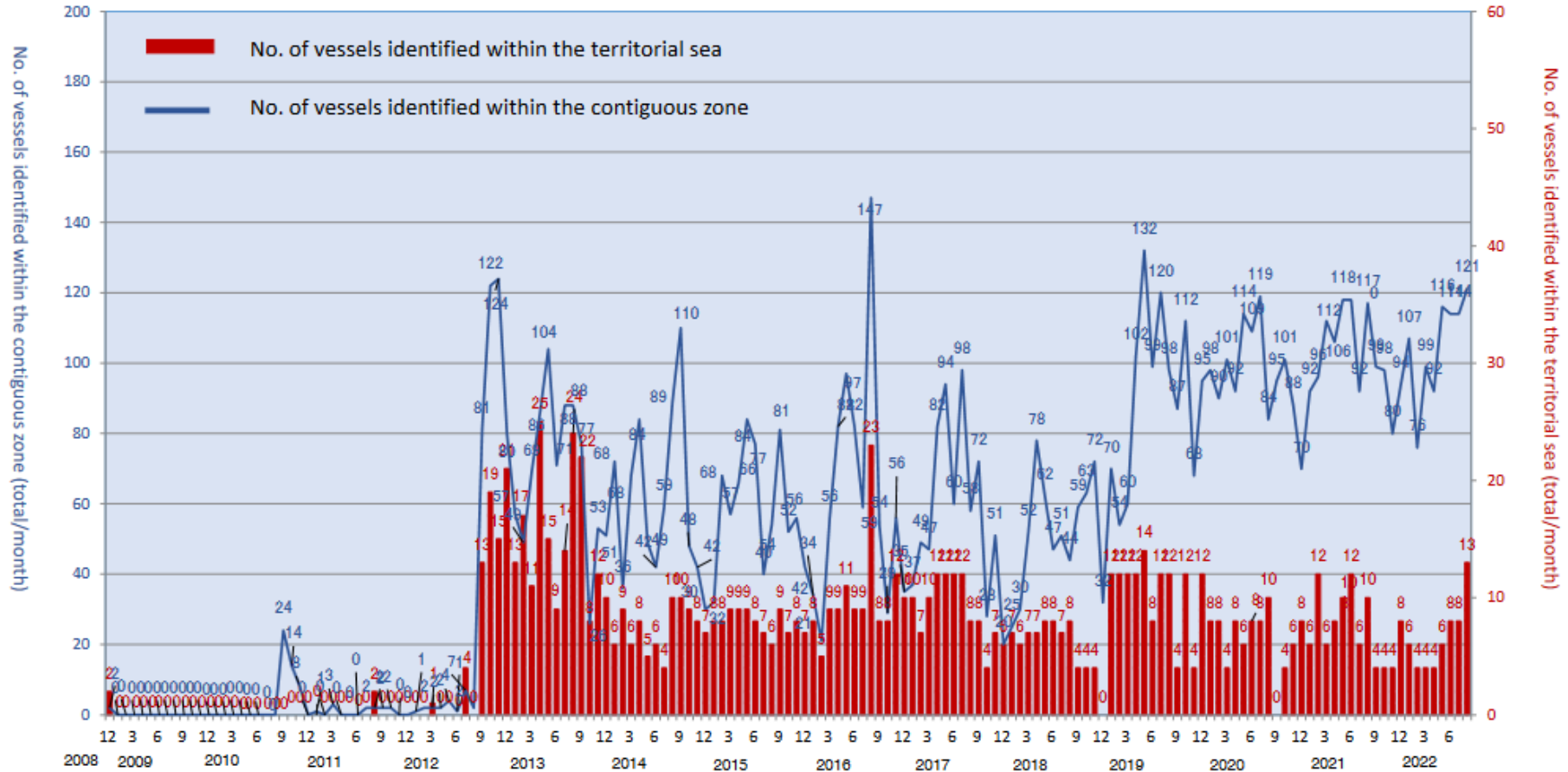
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11. The last attack was in 1979 and lasted until 1991.
12. China is likely to attack Vietnam on the same axes as they did in 1979 and then not withdraw until Vietnam gives up all its bases in the South China Sea.
 - a war with Vietnam is scaleable, attacking Taiwan or Japan has a binary result.
 - China can be defeated and retreat and still call it a victory.
13. China has attacked as far south as Java in 1293 AD.
13. China's population problem –
 - has at least 800 million too many people
 - Mao delayed the adoption of a one child policy for 20 years and so the population blew out to 1,400 million
 - the economy that we will be fighting is the 300 million people in the coastal provinces
 - to eat meat, China needs to import grain and soybeans
 - zero covid policy dropped due to not enough police to enforce it
15. China's geography problem
 - to go anywhere, China has to put its troops in metal containers – ships and aircraft
 - sinking a ship takes about 5% of the cost of building a ship

Fighter Aircraft Design

How can we be sure that China is going to start a war?

- because China's baiting of Japan around the Senkakus is ratcheting up.



Chicom incursions around the Senkakus 2008 – 2022

China is a nasty neighbour.

Ukraine and Lessons for War with China

From Xi Jinping's speech at the 19th Party Congress:

We have committed to "examining ourselves in the mirror, tidying our attire, taking a bath, and treating our ailments," launched activities to see members command and act on the Party's mass line, and initiated a campaign for the observance of the Three Stricts and Three Earnests.

We have taken firm action to "take out tigers," "swat flies," and "hunt down foxes."

His most foreboding words were near the end:

The wheels of history roll on; the tides of the times are vast and mighty. History looks kindly on those with resolve, with drive and ambition, and with plenty of guts; it won't wait for the hesitant, the apathetic, or those shy of a challenge.

Xi intends to provide the ambition that will get some history written in other people's blood.

Ukraine and Lessons for War with China

Primitive societies dream of empire.

Map from a Nationalist primary school textbook of 1938

Chinese ambition extended as far south as Singapore.

We might have had the same problem if the Nationalists had remained in power in 1949.

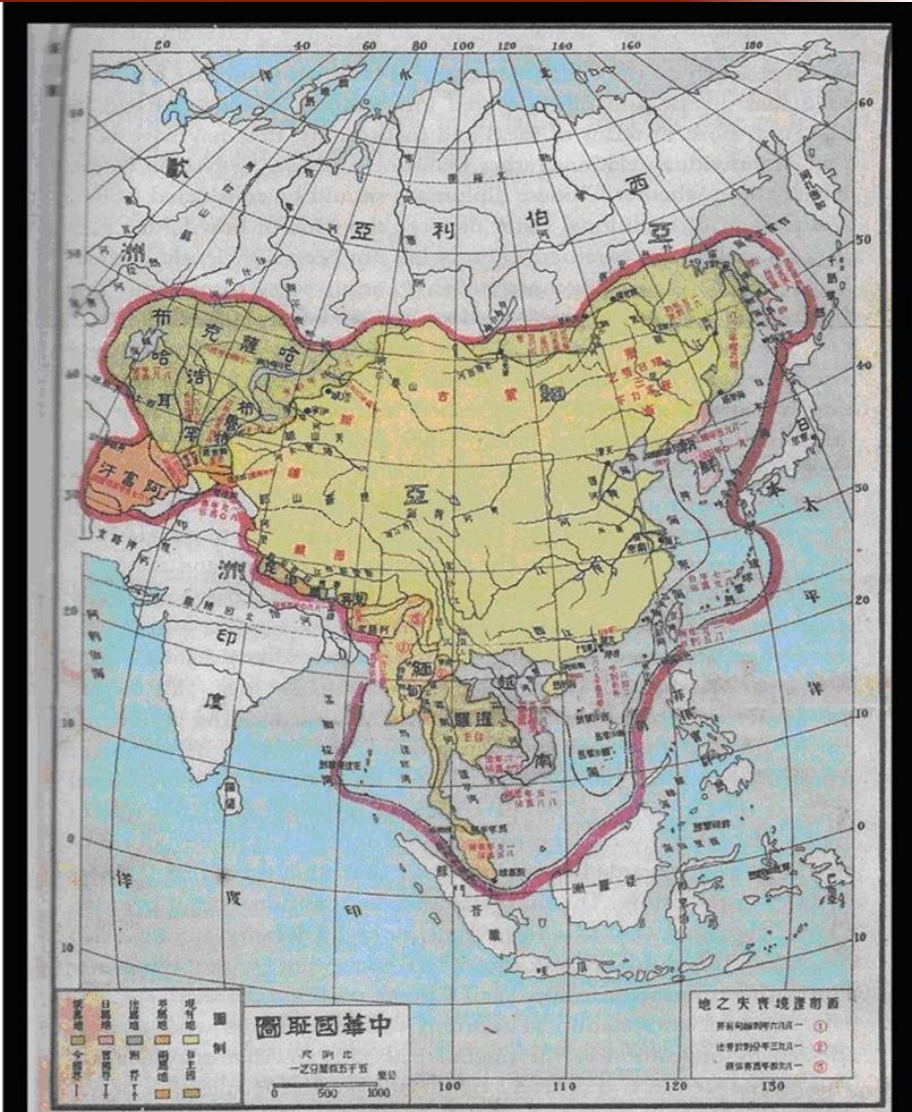
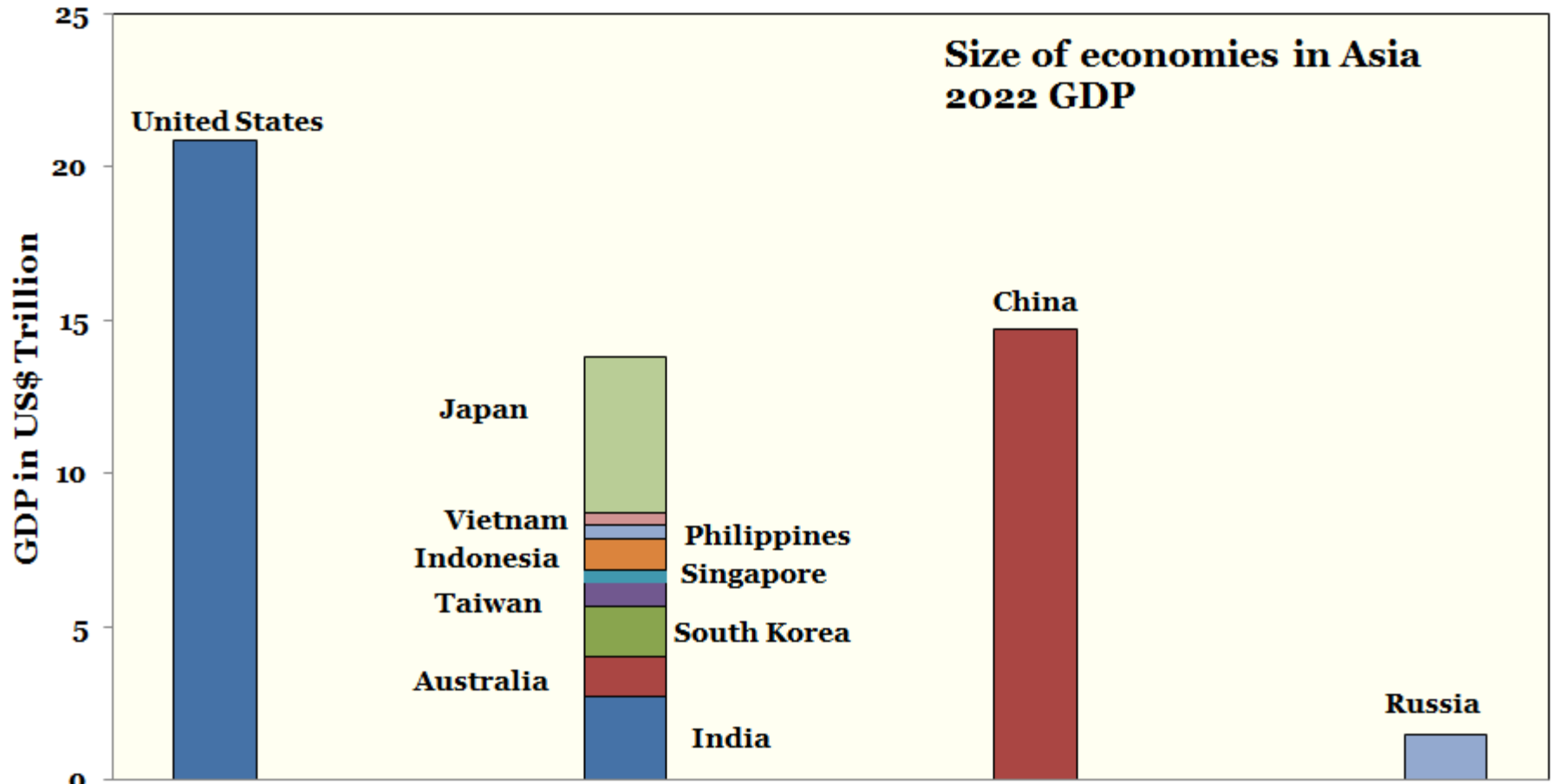


Figure 1 Map of National Shame [Hong Maoxi (洪懋熙), eds., *The New Chinese Map*, authorised by Ministry of Interior for Elementary School (內政部審定小学適用最新中国地圖), Chongqing, Dongfang Yudi Xueshe (東方輿地学社, 1938)].

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And we can win that war if we want to.



In Clausewitzian terms the Chinese economy has reached its culminating point. And 30% of the Chinese economy has been building empty apartments.

In the 1960s, three million Israelis held off three hundred million Arabs.

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China is a structurally poor country.

China produces 147 million tonnes of rice per annum.

No reduction of grain output is possible without impacting food security.

Meat is produced with imported grain and soybeans.

Nearly [95 % of the rice](#) grown in China is produced under traditional puddled transplanted conditions.

Without hand planting of rice China's grain production would plunge.

But farmers planting grain by hand inherently have a low standard of living. There are 425 million agricultural workers in China. So one farm worker feeds only himself and two other people.

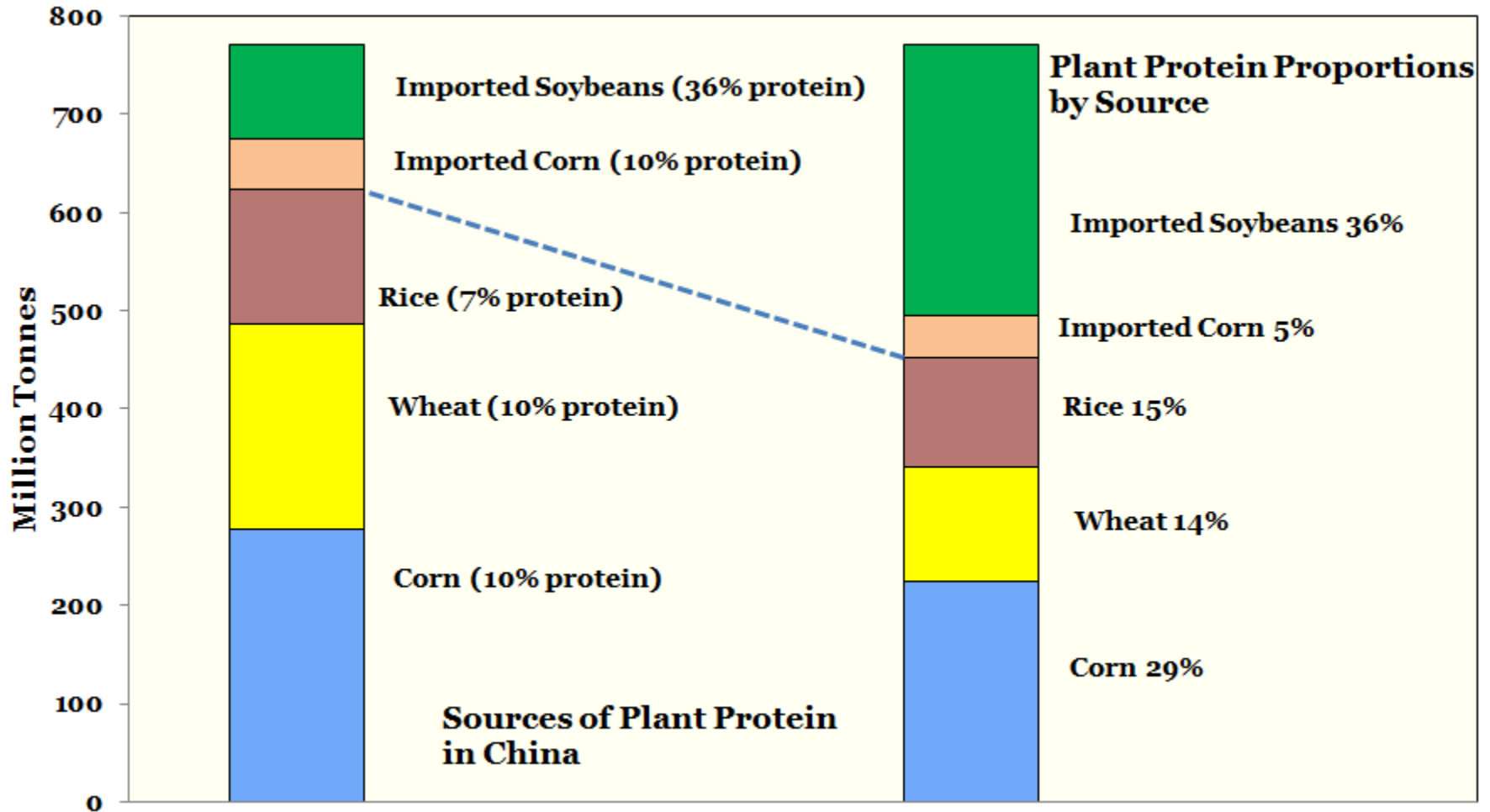
Rice production can't be mechanised without production falling.

The farmers have to be cross-subsidised by the six industrialised coastal provinces of 300 million people.

The New Cold Period underway has the potential to cause starvation in China.

Ukraine and Lessons for War with China

China imports 41% of the plant protein input to its food system.



China is currently trying to increase its grain production by 50 mtpa.

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Base built for attacking Vietnam
22° 24' 22.4" N, 106° 42' 36.0" E

Shed is 350 m. long.



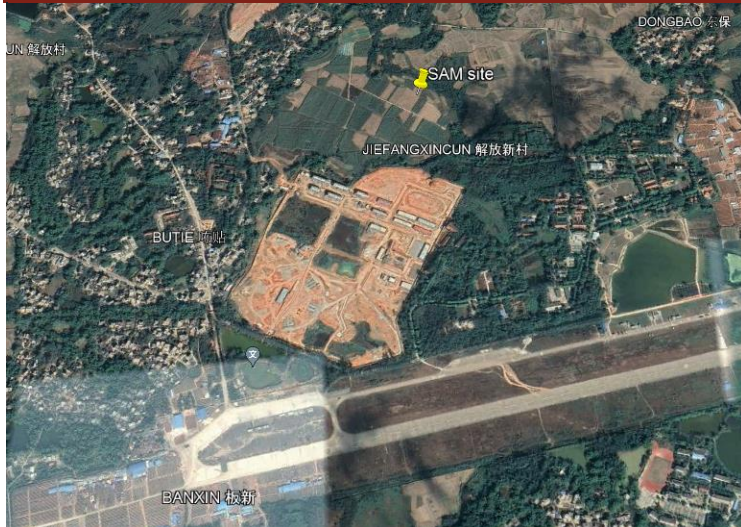
10 km north of the Vietnamese border at 22° 24' 22.4" N, 106° 42' 36.0" E
Artillery pads elsewhere along the border.

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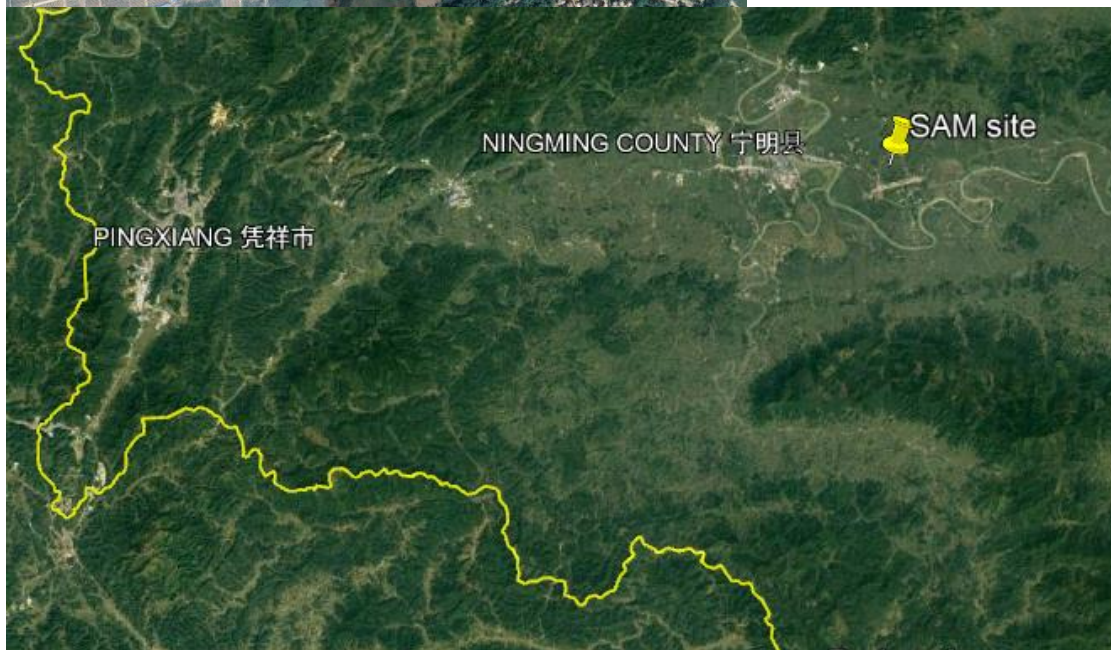


Chicom artillery pads along the China-Vietnam border.

Ukraine and Lessons for War with China



SAM site under construction next to an airfield near the border with Vietnam

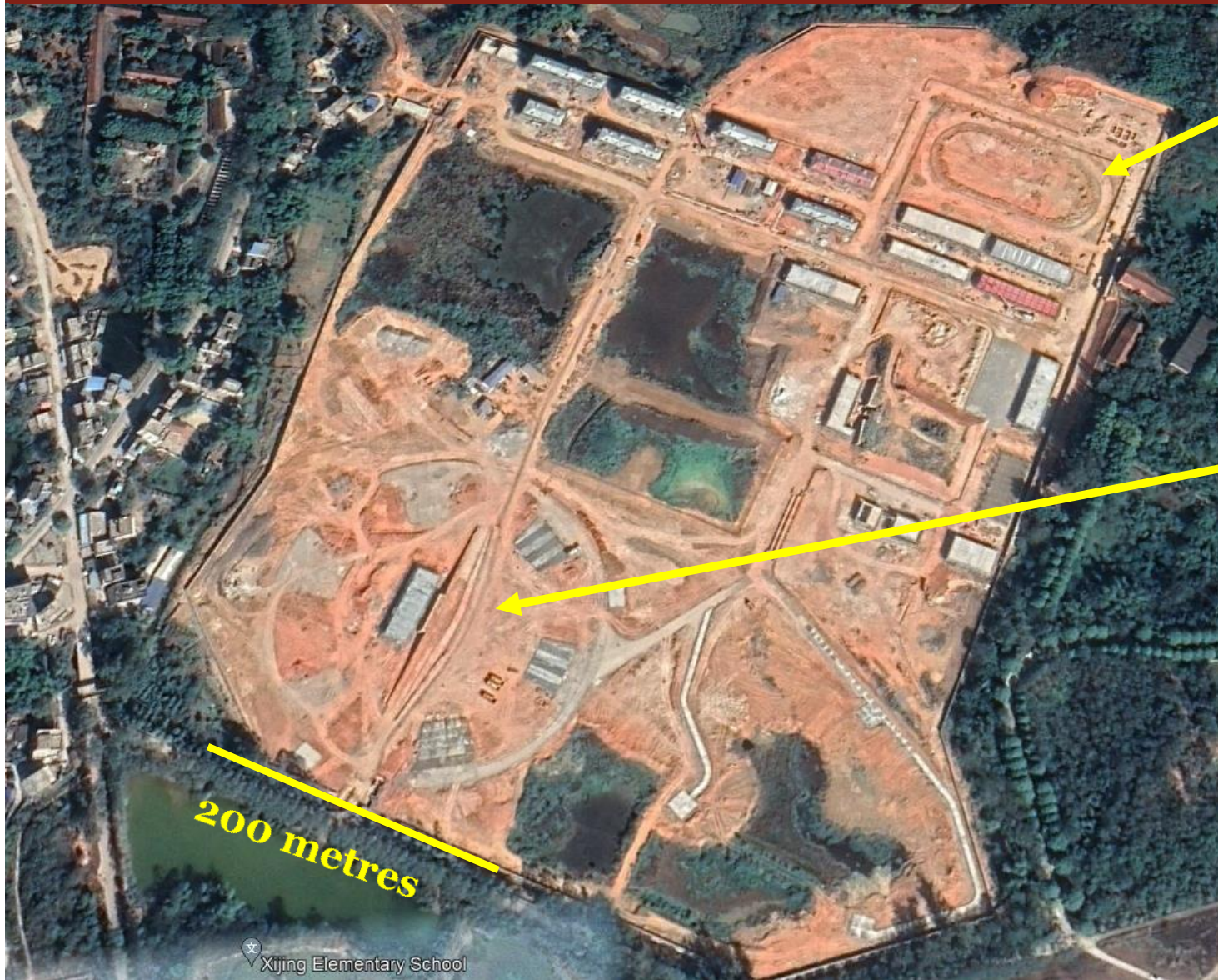


Only 22 km from the border

Well within artillery range

Great state autism – their invasion will go exactly to plan.

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**Obligatory
running track**

**Central ramp
for wheeled
radar**

**200 metres is
the footprint of
the original
MLRS cluster
munition.**

Ukraine and Lessons for War with China



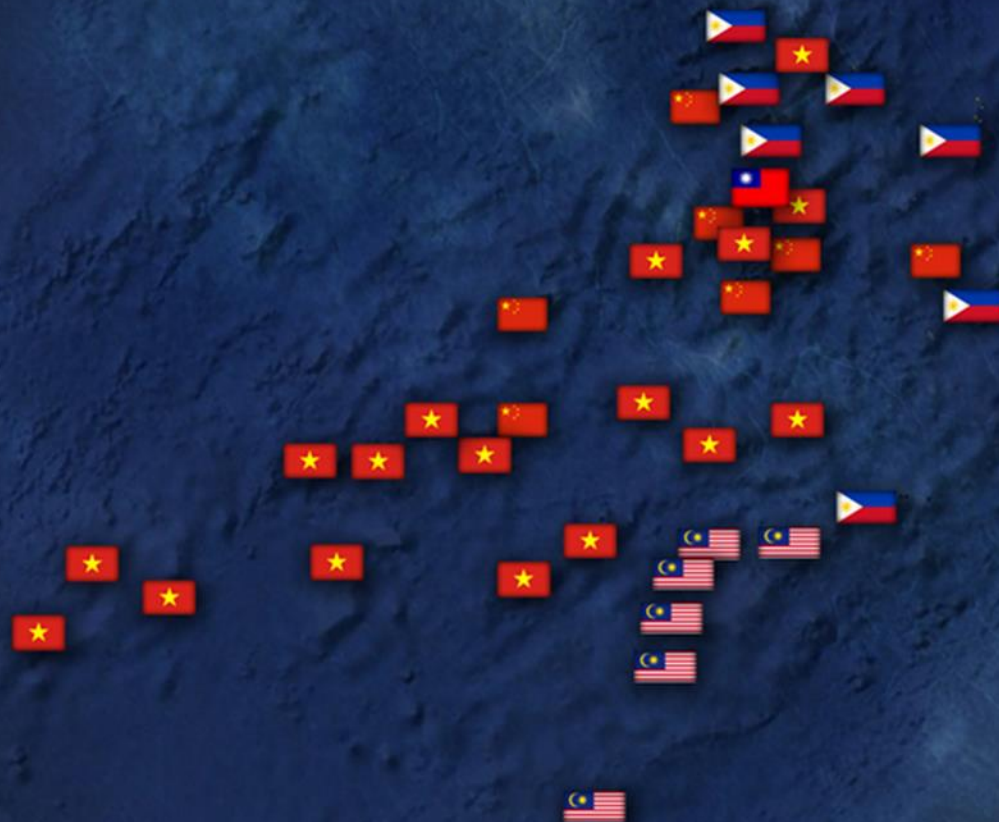
Chicom attack routes in 1979. They will use the same ones again. The Chicoms kept shelling Vietnam up to 1991.

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All bases and outposts in the South China Sea

LEGEND:

-  - TAIWAN
-  - VIETNAM
-  - PHILIPPINES
-  - CHINA
-  - MALAYSIA



Ukraine and Lessons for War with China



Why Taiwan will fight.

1. Because of Russia's plan for Ukraine. From page 10:

Meanwhile the FSB was tasked with capturing local officials. The Russian counterintelligence regime on the occupied territories had compiled lists that divided Ukrainians into four categories:

- *Those to be physically liquidated.*
- *Those in need of suppression and intimidation.*
- *Those considered neutral who could be induced to collaborate.*
- *Those prepared to collaborate.*

The Chicoms will kill the entire Taiwanese political class and sell their organs for transplants. So it is fight or die anyway.

2. The rest of the population will spend the rest of their lives having an hour per day spent on studying “Xi Jinping thought” which will be a living hell.
3. Japan realises that Chicom capture of Taiwan is an existential threat so Taiwan won't be fighting alone.

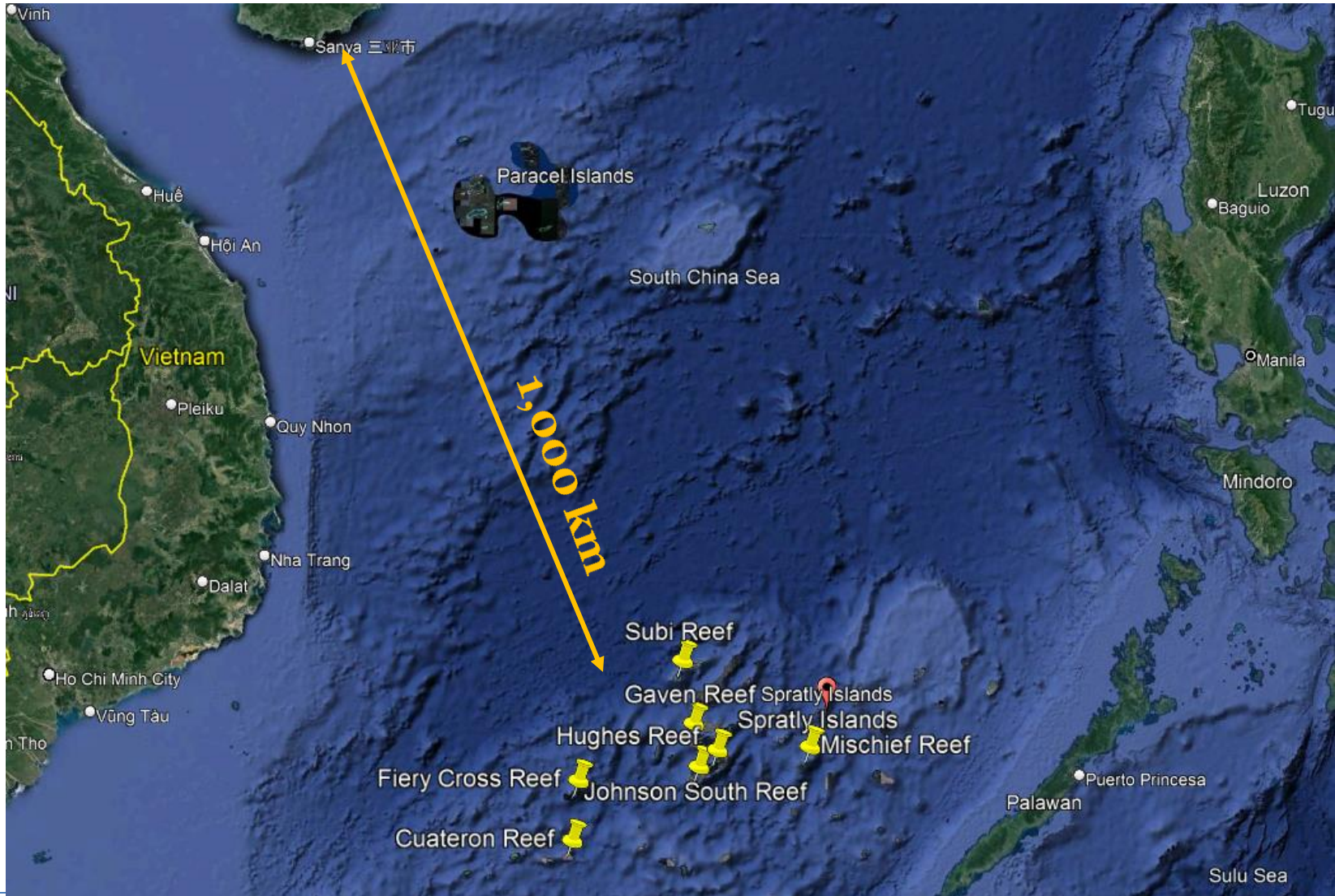
What the Allies should do as soon as the war starts

1. Sink every Chicom ship in the Indian and Pacific Oceans.
2. Seize the Chicom bases in the Spratlys which will be allocated amongst the Allies as per the following schedule:

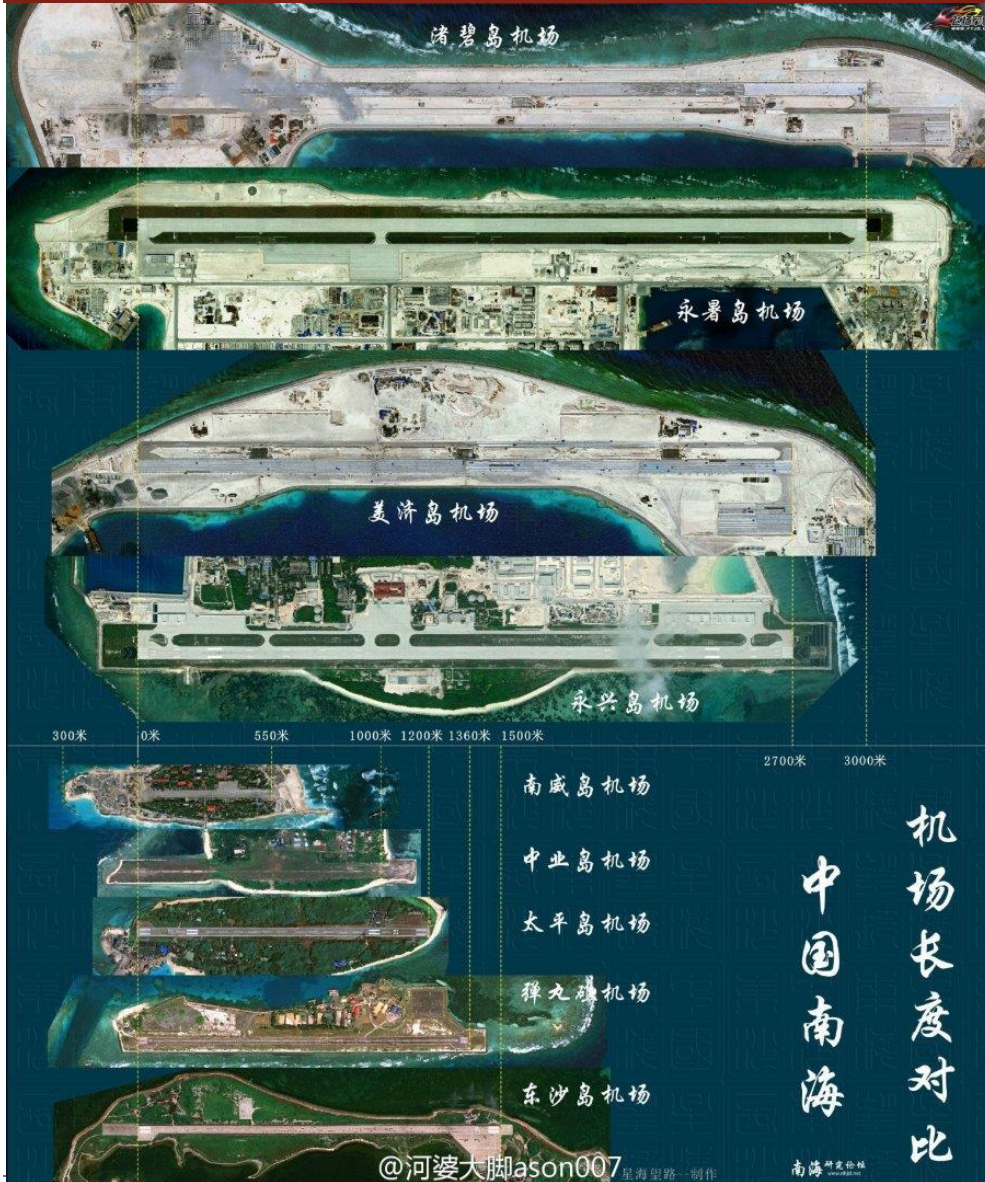
Vietnam	Fiery Cross Reef Cuateron Reef
Japan	Subi Reef Gaven Reef
US	Mischief Reef Hughes Reef Johnson South Reef

The South China Sea is a just a big kill box for Chinese forces and they will waste any enormous amount of effort trying to save their bases there, while exposed to a 1,000 km long supply line that is flanked by Vietnam 200 km to the west and the Philippines 600 km to the east.

The South China Sea Kill Box



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Airfields of the Spratlys and Paracel Islands

- Subi Reef
- Fiery Cross Reef
- Mischief Reef
- Woody Island

- Vietnam
- Philippines
- Taiwan
- Malaysia
- Taiwan

- Spratly Island
- Thitu Island
- Itu Aba Island
- Swallow Reef
- Pratas Island

Potential for a stab in the back from the Obama faction of the Democrats

1. Obama made Japan send back to the US 300 kg of weapons-grade plutonium in 2014 – the Chicoms had complained about Japanese possession of plutonium.
2. China released a video in July 2021 saying that it would nuke Japan on a daily basis if Japan came to the aid of Taiwan.
3. In the Obama administration, Susan Rice used to mock Joe Biden as being stupid but Obama made Biden include Susan Rice in the White House as his agent.
4. The psychopath Bill Gates plays chess online with Obama daily and in turn Obama has a big input into White House policy.
5. Obama has form – he stopped the US military from coming to the aid of the Benghazi consulate and fired 170 generals.
6. A large chunk of US leadership has taken money from China.
7. The parallel is with UK/French abandonment of Czechoslovakia in March 1939.
8. Japan needs nuclear weapons to make sure the war with China remains conventional.

Ukraine and Lessons for War with China

The Chicom threat to nuke Japan



Sometimes it is wise to take people at their word.

It seems that the Chicoms think they have the threat of US nuclear retaliation sorted. So if China starts their war without hitting US bases at the outset, you know it will end with a nuclear attack on Japan.

Australia's Force Structure

Navy

1. We have to assume that our ships will be as easily sunk as the Chicom ships.
 - that once they are found they will be targetted by aircraft from up to 3,000 km away carrying long range ASCMs
 - the development of Soviet supersonic ASCMs drove the switch from CIWS to surface-to-air missiles to defeat the incoming ASCMs
 - once this stock is depleted on the ship, the ship is defenceless and has to return to port to restock the vertical launch tubes
 - all the world's oceans are now like the Mediterranean during WW2, constantly subject to attack by ground-based aircraft
 - US Navy tests found that swarming tactics worked against ship air defence systems
 - it takes an average of seven ASCMs to sink a ship
 - there will be no decisive fleet-on-fleet engagement
 - we might as well build more Arafura class vessels, but properly armed instead of just one 25 mm deck gun.
 - we have no flying boats and so survivors of sinkings will die while waiting to be picked up from the open ocean

Australia's Department of Defence has a mental problem.

Arafura class OPV



Weight: 1,640 tonnes
Crew: 40
Main Gun: 25 mm

Redback IFV



Weight: 42 tonnes
Crew: 3
Main Gun: 30 mm

We will be fighting a maritime war without flying boats.

- Survivors of sinkings and aircraft downings will die on the open ocean.



Grumman Albatross being made by Amphibian Aerospace Industries in Darwin

- We need at least 50 of these.

The RAAF - What Australia Should Do

- 1. Sign with Saab for production of the Gripen E in Australia using Saab's deal with Brazil as the template.**
- 2. Buy the parked-up Gripen C and Gripen D of the Swedish Air Force.**
- 3. Build to a force of 300 fighter aircraft.**
- 4. Make our own Anti Ship Cruise Missiles under licence. You need an average of seven to sink a ship.**
- 5. Make versions of the Ghost Bat that can operate independently and launch antiship cruise missiles.**
- 5. Make seaplanes so that we can pluck survivors from the open ocean.**
- 6. Convert 737s to dropping cruise missiles.**
- 7. Push the JORN coverage northwards to cover the South China Sea.**

Ukraine and Lessons for War with China



1997 BOEING 737-300

Jet Aircraft

Price: **AUD \$3,966,481**

(Price entered as: USD
\$2,700,000)

Financial Calculator

Aircraft Location:
Rolling Hills Estates, California,
USA

Registration #: N73730

Total Time: 51,602

Total Landings: 33,350

Winglets: Yes

Return range of 2,700 km
Bomb load of 20 tonnes
For an average of \$25 million

At one stage in the early 1980s the USAF was interested in saving money. So this proposal to use 747s to launch cruise missiles. Then the feeling passed.



Ukraine and Lessons for War with China

Once again, the Nazis were first.



Fritz X as used in the sinking of the battleship Roma of 45,000 tonnes on 9th September, 1943 – radio-controlled glide weapon released from 18,000’.

Submarines versus Bombers

A submarine costing A\$1,000 million (Taigai Class) will take a month to sail up to the war zone and back to deliver 24 torpedoes and if the trip is wildly successful, 4 sinkings say.

A converted 737 bomber will make one sortie per day and deliver 20 cruise missiles which result in three sinkings or mission kills. That makes 90 per month which is 22x what the submarine achieved for 2.5% of the capital outlay. And a fraction of the crewing. About 800 times more cost-effective in capital outlay.

And if the air-launched campaign is successful, there will be no targets left for any submarines.

The parallel with WW2 is the Mitsubishi G4M “Betty” which carried one torpedo with a ferry range of 5,040 km. Japan built 2,435 of them.

The P-8 maritime patrol aircraft is based on the 737 airframe and drops torpedoes amongst other things.

737 Bombers versus the B-21

The B-21 is about $\frac{3}{4}$ the size of the B-2 so might have a bomb load of 15 tonnes.

The B-21 can unload its bombs/cruise missiles closer to the target but only at night.

The B-21 costs A\$1,000 m. and might cost \$120,000 per hour to operate, based on the B-2 operating cost of \$170,000 per hour.

The 737 costs \$12,000 per hour to operate but launches its cruise missiles a further 400 km out from the danger zone.

The B-21 has a capital cost per daily missile launch of \$67 million while for the 737 bomber it is \$1.3 million.

The B-21 has a operating cost per missile launch of \$67,000 while for the 737 bomber it is \$3,600.

The B-21 is a relic from the era of free-fall nuclear bombs.

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B-21
2022



B-2
1989

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Our bomber fleet in being?



Alice Springs aircraft storage

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Army

1. Tanks aren't dead. Advancing without tanks is three times as expensive in terms of dead infantry. Add the Trophy system at US\$1 million per vehicle to reduce the ATGM threat.
2. Ground attack aircraft and helicopters are dead. Replace with precision-guided, missile artillery able to outrange the enemy's tube artillery.
3. Tube artillery should deliver cluster rounds with dual-purpose improved conventional munition (DPICM). Missiles should also deliver DPICM.
4. Increase the infantry fighting vehicle order ten-fold.
5. Diesel tanks instead of turbine-driven tanks in a fuel-constrained world.



Defense of Ukraine  @DefenceU ·

👤 Ukraine government organization

To win faster we need tanks.



Defense of Ukraine  @DefenceU · 2h

👤 Ukraine government organization

Tanks. This is what we think about every day. Every minute.



Himars?

- no need for the special truck or for operators.
- any flatbed truck can be a mobile platform or put it on the ground.
- Israeli Jumper system concept has 8 missiles.
- Not put into production.
- Should be based on 20' containers to use existing logistics systems.

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Artillery Call for Fire Process

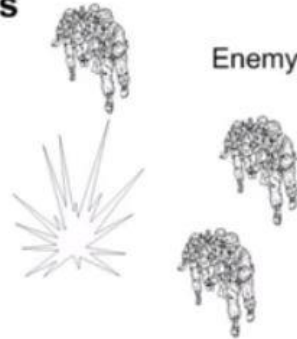
Forward Observer (FO)
calls for and adjust fire
on enemy



Fire Direction Center
(FDC) computes firing
data (range, trajectory
and shell/fuse info) to
pass to gun line's gun(s)



Gun line gun(s) fire the
mission. FO observes
the effects, continues to
adjust fall of shot until
"End of Mission" (EOM)



Enemy



FDC's parent unit's
(FDC) monitors the
mission and intervenes
as needed

Which removes most of the people and logistics from the current system of calling in artillery.

The Forward Observer is the only human needed in the loop.

And the only human at risk.

No lags and no potential for error.

Ukraine and Lessons for War with China

Last four books

