

Iran loads 'first domestically-made nuclear fuel'



Iran's president Mahmoud Ahmadinejad criticises foreign attempts to stop Iran's nuclear progress, in a speech made after he visited a new nuclear facility

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Iran nuclear crisis

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Iran has staged an elaborate ceremony to unveil new developments in its nuclear programme.

Tehran says it has used domestically-made nuclear fuel in a reactor for the first time, and also unveiled more efficient enrichment centrifuges.

State television showed President Ahmadinejad inspecting the rods as they were loaded into a reactor.

Western countries fear Iran wants to make nuclear weapons; Tehran says it only wants to produce its own energy.

The government unveiled the "new generation" of faster, more efficient uranium enrichment centrifuges at its Natanz facility in the centre of the country.

The head of Iran's Atomic Energy Organisation, Fereydoon Abbasi Davani, said they were three times more efficient than their existing capacity.

President Ahmadinejad was wearing a white coat at the research reactor in Tehran, and was also shown attending the ceremony to mark what he has called the great achievements in the nuclear sphere.

He said last week that his country would never halt its programme to enrich uranium.

Home-grown industry

In January the International Atomic Energy Agency (IAEA) confirmed that Iran had started the production of uranium enriched up to 20% at its Qom plant.

A deal to provide fuel for the reactor from abroad collapsed two years ago - at which point Iran decided to make the fuel itself.

One central point links these developments, says the BBC's Iran correspondent James Reynolds: Iran is determined to show that it can master nuclear technology on its own, and that international sanctions against its nuclear programme will make no difference.

The US and the European Union have recently imposed new sanctions targeting Iranian oil sales as part of a drive to increase international pressure on Tehran over its nuclear programme.

Talks between Iran and six world powers - the US, UK, France, Germany, Russia and China - on the nuclear programme collapsed a year ago and show little sign of resuming.

1 February 2012 Last updated at 05:03 ET

Iran nuclear: UN inspectors have 'good' talks



Mr Nackaerts led a team that had three days of talks in Iran, but did not visit nuclear sites

UN nuclear inspectors back from a trip to Iran to discuss its contested nuclear programme have said they hope to return to the country.

The International Atomic Energy Agency's deputy director-general said the Iranians were "committed" to "resolving all outstanding issues".

Inspectors described the trip as positive but said there was still work to do.

Iran insists its uranium enrichment work is peaceful in purpose.

The IAEA's Herman Nackaerts said his organisation and the Iranians were both determined to address all outstanding matters.

"But of course there is still a lot of work to be done and so we have planned another trip in the very near future," he told reporters as he landed in Vienna, the organisation's headquarters.

A few days ago, Iran described its three days of talks with the IAEA inspectors as "positive and constructive". According to state media the IAEA team did not inspect any nuclear sites.

The inspectors' evaluation of their visit may form part of the next written report on Iran's nuclear programme, expected later in February.

Tehran says its nuclear activities are simply for electricity generation.

But last November, the IAEA said it had information suggesting Iran had carried out tests "relevant to the development of a nuclear explosive device".

Since then, the US and the European Union have imposed a series of sanctions against Iran, including measures targeting the country's lucrative oil industry.

31 January 2012 Last updated at 19:42 GMT

Iran says nuclear talks with IAEA 'constructive'



Some hardline Iranian students protested against the IAEA visit

Iran says it has ended three days of "positive and constructive" talks with UN nuclear inspectors.

The semi-official Fars news agency said the two sides had agreed to continue talks, but the report did not specify when the next meeting would happen.

The International Atomic Energy Agency (IAEA) has so far not commented.

The IAEA inspectors' visit to Iran comes at a time of heightened tension between the Tehran government and the West over the country's nuclear programme.

The US and its allies suspect Iran's uranium enrichment work has military aims but Tehran insists it is for electricity generation.

"Talks between Iran and the visiting team of inspectors... were held in a positive and constructive atmosphere," Fars said.

"The two sides agreed to continue the talks."

An unnamed official quoted by Iran's state-run Arabic language TV channel al-Alam said "technical and legal issues were discussed", adding that the inspectors had not visited any nuclear sites.

A protest against the visit by some hard-line Iranian students took place outside the country's Atomic Energy Organisation, ISNA news agency reported.

Before the trip, the head of the IAEA team, Deputy Director General Herman Nackaerts, said they hoped to "resolve all the outstanding issues with Iran" over its nuclear programme.

"In particular we hope that Iran will engage with us on our concerns regarding the possible military dimensions of Iran's nuclear programme," he said.

The inspectors will now take Iran's answers back to the IAEA headquarters in Vienna.

The BBC's James Reynolds says their evaluation may be included in the next written report on Iran's nuclear programme expected in the next month.

The IAEA said last November it had information suggesting Iran had carried out tests "relevant to the development of a nuclear explosive device".

Since then the US and the European Union have imposed a series of sanctions against Iran, including measures targeting the country's lucrative oil industry.

29 January 2012 Last updated at 02:40 GMT

UN inspectors visit Iran as nuclear tensions rise



Washington has said it will use force if necessary to keep the Strait of Hormuz open

Inspectors from the International Atomic Energy Agency (IAEA) have begun a three-day visit to Iran, to try to determine the purpose of the country's nuclear programme.

The visit comes at a time of escalating tension between Tehran and the West over Iran's nuclear activities.

The director general of the IAEA, Yukiya Amano, says Iran needs to engage and answer the agency's questions.

Iran denies that it is trying to develop a nuclear weapon.

The head of the IAEA team said they hoped to "resolve all the outstanding issues with Iran" over its nuclear programme.

"In particular we hope that Iran will engage with us on our concerns regarding the possible military dimensions of Iran's nuclear programme," IAEA Deputy Director General Herman Nackaerts said before leaving for Iran from Vienna's airport.

Iran's ambassador to the IAEA, Ali Asgar Soltaniyeh, said the inspection was aimed at foiling enemy plots and will prove the peaceful nature of Iran's nuclear work.

The dispute over Iran's nuclear activities has intensified since an IAEA report in November expressed serious concerns about the possible military dimensions of the programme.

The agency said it had information suggesting Iran had carried out tests "relevant to the development of a nuclear explosive device".

Sanctions

Since then the European Union and the United States have introduced a series of sanctions against Iran, including measures targeting the country's lucrative oil industry.

The EU sanctions prohibit the import, purchase and transport of Iranian crude oil and petroleum products as well as related finance and insurance.

All existing contracts will have to be phased out by 1 July.

That timing was intended to give some EU countries time to switch to alternative sources of oil, but Iranian lawmakers are now considering stopping exports to Europe within days, a move likely to drive up fuel prices.

Iran has also threatened to close the Strait of Hormuz at the entrance to the Gulf, through which more than 20% of the world's traded oil passes.

The United States has said it will use force if necessary to keep the shipping lane open, raising the prospect of a confrontation with Iran.

26 January 2012 Last updated at 15:57 GMT

Nuclear row: Iran President Ahmadinejad offers talks



President Ahmadinejad accused the West of trying to ruin negotiations in order to put pressure on Iran

Iran is ready to revive talks with the West but tougher sanctions will not force it to give into demands over its nuclear programme, its president says.

On Monday, the EU banned new oil contracts with Iran, saying it was not confident Tehran's nuclear plans were "exclusively peaceful".

President Mahmoud Ahmadinejad said it was evident that "those who resort to coercion are opposed to talks".

Tehran insists its nuclear programme is for energy purposes.

Negotiations between Iran and the five permanent UN Security Council members plus Germany ended in a stalemate in January 2011.

President Ahmadinejad is the highest-ranking Iranian official since then to offer to resume talks.

In a speech made in Kerman, southeastern Iran, and broadcast on state television, he accused the West of trying to ruin negotiations in order to put increased pressure on Iran.

"It is the West that needs Iran and the Iranian nation will not lose from the sanctions," the president said.

"It is you who come up with excuses each time and issue resolutions on the verge of talks so that negotiations collapse," he said.

"Why should we shun talks? Why and how should a party that has logic and is right shun talks? It is evident that those who resort to coercion are opposed to talks and always bring pretexts and blame us instead."

BBC correspondent Kasra Naji says Tehran has failed to clarify exactly what kind of talks it is prepared to enter into.

In the last two rounds of meetings, in Turkey and Geneva, Iranian officials were happy to talk about anything except the West's concerns about its nuclear programme, our correspondent added.

EU sanctions

EU foreign ministers formally adopted the sanctions against Iran at a meeting in Brussels.

In a [joint statement](#), UK Prime Minister David Cameron, French President Nicolas Sarkozy and German Chancellor Angela Merkel said Iran had "failed to restore international confidence in the exclusively peaceful nature of its nuclear programme".

The EU said the sanctions prohibit the import, purchase and transport of Iranian crude oil and petroleum products as well as related finance and insurance. All existing contracts will have to be phased out by 1 July.

Investment as well as the export of key equipment and technology for Iran's petrochemical sector is also banned.

EU foreign policy chief Catherine Ashton said the purpose of the sanctions was "to put pressure on Iran to come back to the negotiating table".

Iran branded the embargo "unfair" and "doomed to fail", but it was welcomed by US President Barack Obama, who said it showed international unity against the "serious threat" posed by Iran's nuclear programme.

The EU currently buys about 20% of Iran's oil exports.

IAEA Iran visit

Earlier this week, the International Atomic Energy Agency, the UN's nuclear watchdog confirmed it would send a team to Iran between 29 and 31 January "to resolve all outstanding substantive issues".

In a report last November the IAEA said it had information suggesting Iran had carried out tests "relevant to the development of a nuclear explosive device".

Iran sells most of its oil to countries in Asia. The EU and the United States are now working to persuade Asian countries to reduce their purchases from Iran as well.

But Beijing has criticised the European Union for its ban. China - a big importer of Iranian crude oil - has long opposed unilateral sanctions targeting Iran's energy sector. It says the nuclear dispute should be resolved through dialogue.

On Thursday, China's official Xinhua News Agency quoted its foreign ministry as saying: "To blindly pressure and impose sanctions on Iran are not constructive approaches."

Iran has already threatened to retaliate to the sanctions against it by blocking the Strait of Hormuz at the entrance to the Gulf, through which 20% of the world's oil exports pass.

The US has said it will keep the trade route open, raising the possibility of a confrontation.

Iran's top oil export destinations 2010



Source: US Energy Information Administration
18 January 2012 Last updated at 15:45 GMT

Iran nuclear: Russia's Lavrov warns against attack



The Iranian nuclear site at Fordo - seen here in a 2009 satellite image - is now producing uranium enriched to 20%

The Russian foreign minister has warned that a Western military strike against Iran would be "a catastrophe".

Sergei Lavrov said an attack would lead to "large flows" of refugees from Iran and would "fan the flames" of sectarian tension in the Middle East.

Israeli Defence Minister Ehud Barak earlier said any decision on an Israeli attack on Iran was "very far off".

Meanwhile, Iran's foreign minister said talks on its nuclear programme would "most probably" take place in Istanbul.

Ali Akbar Salehi told reporters during a visit to Turkey that negotiations were going on about venue and date, and the timings would be settled soon.

But the UK Foreign Office said that there were "no dates or concrete plans" for talks, as Tehran was "yet to demonstrate clearly that it is willing to respond to [EU foreign policy chief] Baroness Ashton's letter and negotiate without preconditions.

"Until it does so, the international community will only increase pressure on it through further peaceful and legitimate sanctions."

Analysis



Jonathan Marcus BBC Diplomatic Correspondent

As economic sanctions against Tehran begin to bite, the mounting tensions both between Israel and Iran on the one hand and between the US and Iran on the other have prompted growing concerns that a military clash could fast be approaching.

This is the context for the Russian Foreign Minister Sergei Lavrov's warning that a western strike on Iran - be it from Israel or the US - would prompt "a catastrophe".

Well aware of the current upheavals across the region, Mr Lavrov says that such an attack would "pour fuel on the fire of hidden Sunni-Shia confrontation that is already smouldering" and might prompt "a chain reaction".

Talks between Iran and six world powers - the US, UK, China, France, Russia and Germany - were last held in Istanbul a year ago but no progress was made.

A Western diplomat told the BBC that Iran was "chasing headlines" and "pretending that it was ready to engage". Tehran was "more interested in propaganda" than in sitting down without preconditions, he said.

Sanctions

Tensions with Iran have risen in recent weeks after the UN's nuclear monitors confirmed Tehran was producing 20% enriched uranium at its Fordo plant near Qom.

The US and its allies suspect the Islamic Republic of secretly trying to develop a nuclear weapons capacity but Iran insists its programme is peaceful.

The US has recently imposed sanctions on Iran's central bank and against three oil companies which trade with the country. The European Union has said it will place an embargo on Iran's oil exports.

For its part, Iran has threatened to block the transport of oil through the Strait of Hormuz, a key shipping route.

The comments from Russia's foreign minister included criticism of the Western moves to strengthen sanctions on the Islamic Republic, which he said were aimed at "stifling" Iran's economy.

Mr Lavrov told journalists in Moscow that they would have to ask those who he said were "talking constantly" about a military attack to find out if it would occur. He said such an attack would start off a "chain reaction" and he did not know how that would end.



Iranian scientist Mostafa Ahmadi-Roshan was killed by a bomb on his car
Israel - thought to be the only nuclear power in the region - has said it could launch a military strike against Iran to prevent it developing nuclear weapons.

Last week, Iran blamed Israel and the US for the death of Mostafa Ahmadi-Roshan, an Iranian nuclear scientist apparently killed by a bomb targeting his car in Tehran.

US concern

BBC diplomatic correspondent Jonathan Marcus says Mr Barak's comments can be seen as an attempt to placate the Americans, who are growing concerned that Israel may take military action against Iran without alerting Washington in advance.

The Israeli defence minister, speaking on Israel's army radio, implied that any plans would be co-ordinated with the US.

"I don't think our ties with the United States are such that they have no idea what we are talking about," he said.

The US defence chief General Martin Dempsey is due to arrive in Israel on Thursday for his first visit since becoming chairman of the joint chiefs of staff in September. On his agenda are meetings with various Israeli officials including Mr Barak.

[Haaretz reports](#) that Israel will present Gen Dempsey with an intelligence assessment that indicates Iran has "not yet decided" whether to make a nuclear bomb.

It is not clear when Iran might make the decision to use its nuclear capabilities to manufacture a weapon, the paper says.

11 January 2012 Last updated at 09:25 GMT

Iran car explosion 'kills nuclear scientist' in Tehran



A motorcyclist stuck a bomb on the side of the car in northern Tehran, say reports

A university lecturer and nuclear scientist has been killed in a car explosion in north Tehran, reports say.

Iranian media sources named the casualty as Mostafa Ahmadi-Roshan, an academic who also worked at the Natanz uranium enrichment facility.

The blast happened when a motorcyclist stuck a magnetic bomb on the car, said Iran's semi-official Fars news agency.

Several Iranian nuclear scientists have been assassinated in recent years, with Iran blaming Israel and the US.

Both countries deny the accusations.

Local sources said Wednesday's blast took place at a faculty of Iran's Allameh Tabatabai university.

Two others were reportedly also injured in the blast, which took place near Gol Nabi Street, in the north of the capital.

'Magnetic bomb'

Mr Ahmadi-Roshan, 32, was a graduate of Sharif University and supervised a department at Natanz uranium enrichment facility in Isfahan province, Fars reported.

Attacks on Iranian scientists

Jan 2012 - Mostafa Ahmadi Roshan, a professor at the Technical University of Tehran, died after bomb was placed on his car by a motorcyclist

Nov 2010 - Majid Shahriari, member of nuclear engineering faculty at Shahid Beheshti University, killed in Tehran after bomb attached to his car by motorcyclist in Tehran. Another scientist, Fereydoon Abbasi Davani - future head of the Atomic Energy Organisation of Iran - is hurt in a separate attack

Jan 2010 - Massoud Ali Mohammadi, a physics professor, died when a motorcycle rigged with explosives exploded near his car

"The bomb was a magnetic one and the same as the ones previously used for the assassination of the scientists, and the work of the Zionists [Israelis]," deputy Tehran governor Safarali Baratloo said.

Witnesses said they had seen two people on the motorbike fix the bomb to the car, reported to be a Peugeot 405. Another person in the car was reported to have been seriously injured.

The BBC's Mohsen Asgari, in Tehran, says that the explosion was caused by a targeted, focussed bomb intended to kill one or two people and small enough not to be heard from far away.

The latest attack comes almost two years to the day since Massoud Ali Mohammadi, a 50-year-old university lecturer at Tehran University, was killed by a remote-controlled bomb as he left his home in Tehran on 12 January 2010.

Nuclear suspicions

Reports at the time described Dr Mohammadi as a nuclear physicist, but it later appeared that he was an expert in another branch of physics.

There was also confusion as to whether the attack had any domestic political overtones because of reports about his apparent links to an opposition presidential candidate.

However, in August 2011, an Iranian man - Majid Jamali Fashi - was sentenced to death for the killing, with state authorities saying he was paid by Israel's Mossad spy agency. Israel does not comment on such claims.

Of the latest attack, Fars reports that the bombing method appears similar to another 2010 bombing which injured former university professor Fereyduun Abbasi-Davani, now the head of the country's atomic energy organisation.

There has been much controversy over Iran's nuclear activities.

Tehran says its nuclear programme is for peaceful energy purposes, but the US and other Western nations suspect it of seeking to build nuclear weapons. 10 January 2012 Last updated at 04:39 GMT

Iran's uranium enrichment is escalation, says US



Satellite images showed the Fordo site under construction in 2009

The US has said Iran's enrichment of uranium at an underground site is "a further escalation" of its ongoing violation of UN resolutions.

The warning comes after the UN's nuclear watchdog confirmed that Tehran had begun enriching uranium up to 20% at its northern Fordo plant.

Analysts say 20% enrichment is an important step towards making uranium weapons-grade, but Tehran says it is for purely peaceful purposes.

The UK and France condemned the move.

'Provocative act'

In Washington, state department spokeswoman Victoria Nuland said on Monday that enrichment works at Fordo, near the city of Qom, raised further doubts about Tehran's peaceful intentions.

"We call on Iran once again to suspend enrichment activities, co-operate fully with the IAEA (International Atomic Energy Agency) and immediately comply with all (UN) Security Council and IAEA board of governors resolutions," she said.

"All nuclear material in the (Fordo) facility remains under the agency's containment and surveillance"

Gill Tudor IAEA spokeswoman

In Paris, a statement by the foreign ministry said the Iranian move "leaves us with no other choice but to reinforce international sanctions and to adopt, with our European partners and all willing countries, measures of an intensity and severity without precedent".

British Foreign Secretary William Hague condemned the "provocative act which further undermines Iran's claims that its programme is entirely civilian in nature".

Earlier on Monday, a spokeswoman for International Atomic Energy Agency (IAEA), Gill Tudor, said the agency could "confirm that Iran has started the production of uranium enriched up to 20%".

She added that "all nuclear material in the facility remains under the agency's containment and surveillance".

Iran insists enriched uranium is needed to make isotopes to treat cancers.

The existence of the facility near Qom, in the north of the country, only came to light after it was identified by Western intelligence agencies in September 2009.

Tehran said it began the project in 2007, but the IAEA believes design work started in 2006.

BBC Iran correspondent James Reynolds says the facility has attracted plenty of attention and suspicion.

It is underground, heavily fortified and protected by the armed forces - making it a very difficult target for air strikes.

The US and Israel have refused to rule out attacks on Iranian facilities.

Analysis



James Reynolds BBC Iran correspondent

Iran's new facility began in secret. The state may have preferred to keep it that way. But in September 2009 the US, France and the UK publicly revealed its existence - a fact that was subsequently confirmed by Iran.

Since then, the new plant has attracted plenty of both attention and suspicion. It has been built underground and it is heavily fortified. In particular, Iran appears to want to guard against potential air strikes. Military experts suggest that the facility may be able to survive attack from all but the most powerful bombs.

Iranian officials suggest that the new plant is an important step forward for the country's nuclear programme. But it is not yet clear how productive the facility will be. Iran says it hopes to carry out what's known as medium-level uranium enrichment at the plant - uranium enriched to 20%.

Western analysts warn that medium-level enrichment is an important step towards enriching uranium to weapons-grade. But Iran stresses that its nuclear ambitions are entirely peaceful.

Atomic bomb joke

Earlier on Monday, Iran's Supreme Leader Ayatollah Ali Khamenei insisted Iran would not bow to pressure from the West.

"The Islamic establishment... knows firmly what it is doing and has chosen its path and will stay the course," he said in a speech broadcast on state television.

Meanwhile, Iranian President Mahmoud Ahmadinejad - who is currently on a visit to Venezuela - received a strong backing from President Hugo Chavez.

"They present us as aggressors," the Venezuelan leader said, referring to US government officials. "Iran hasn't invaded anyone. Who has dropped thousands and thousands of bombs... including atomic bombs?"

The Iranian and Venezuelan presidents also joked about having an atomic bomb at their disposal.

"That hill will open up and a big atomic bomb will come out," Mr Chavez said, laughing.

"The imperialist spokesmen say... Ahmadinejad and I are going into the Miraflores (presidential palace) basement now to set our sights on Washington and launch cannons and missiles... It's laughable."

Tensions have been high since the US imposed new sanctions on Iran's central bank and the European Union said it would place an embargo on Iran's oil exports.

EU foreign ministers are due to meet to approve the embargo later this month.



Mahmoud Ahmadinejad and Hugo Chavez lavished each other with praise
Iran has threatened to close the Strait of Hormuz - a key route from the Gulf through which 20% of the world's traded oil passes.

Defence Secretary Leon Panetta warned on Sunday that such a move would cross a "red line" and "we would take action and reopen the strait".

Adding to the strains, a court in Tehran on Monday sentenced to death an Iranian-American man accused of being a CIA spy.

Amir Mirzai Hekmati, 28, a former US marine, had been show on state television in December allegedly confessing to being part of a plot to infiltrate Iran's intelligence services for the CIA.

Our correspondent says Iran's judicial and political systems place huge emphasis on the importance of confessions, which are viewed with concern by human rights groups.

Mr Hekmati's family, who live in Arizona, say the charges against him are fabricated and that he was in Iran to visit his grandmothers. The US has demanded his release.

9 January 2012 Last updated at 20:47 GMT

Iran enriching uranium at Fordo plant near Qom

Iran has begun enriching uranium at a heavily fortified underground site, the UN's nuclear watchdog has confirmed.

The International Atomic Energy Agency said medium-level enrichment had begun at the Fordo plant, in northern Iran.

Iran has said it plans to carry out uranium enrichment there - but insists this is for purely peaceful purposes.

The West argues Tehran is building a nuclear weapons capacity. The US called the work at Fordo a "further escalation" in the dispute.

The existence of the facility near Qom, in the north of the country, only came to light after it was identified by Western intelligence agencies in September 2009.

Tehran said it began the project in 2007, but the IAEA believes design work started in 2006.

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She added that "all nuclear material in the facility remains under the agency's containment and surveillance".

Iran insists enriched uranium is needed to make isotopes to treat cancers. But analysts say 20% enrichment is an important step towards making uranium weapons-grade.

In Washington, state department spokeswoman Victoria Nuland said such a level of enrichment was "a further escalation" of the Iranians' "ongoing violations with regard to their nuclear obligations", and suggested "a different kind of a nuclear programme".

'Falsely accused'

Earlier on Monday, Iran's Supreme Leader Ayatollah Ali Khamenei insisted Iran would not bow to pressure from the West.

"The Islamic establishment... knows firmly what it is doing and has chosen its path and will stay the course," he said in a speech broadcast on state television.

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Mr Hekmati's family, who live in Arizona, say the charges against him are fabricated and that he was in Iran to visit his grandmothers. The US has demanded his release.

2 December 2011 Last updated at 03:53 GMT

US Senate passes sanctions on Iran central bank



Iran insists its nuclear programme is for peaceful purposes only

The US Senate has unanimously approved economic sanctions on Iran targeting the country's oil industry, despite warnings the move could backfire.

The measures, passed by 100 votes to nil, would ban foreign firms from doing business with the Iranian central bank.

Before it can become law, it must be approved by the House and President Barack Obama, who is sceptical.

The effort to thwart Iran's alleged nuclear ambitions followed new EU sanctions imposed earlier on Thursday.

Meanwhile, diplomats at the Iranian embassy in London must leave Britain by Friday afternoon.

They were ordered to go after hundreds of Iranian protesters stormed the UK embassy in Tehran on Tuesday.

Oil-price rise?

In recent weeks the US has introduced sanctions against Iran's financial sector, although it has stopped short of targeting the central bank outright.

President Barack Obama has been cautious about harsher sanctions, fearing such a move could disrupt the oil markets at a time of economic uncertainty for many Americans, and alienate potential allies.

US officials have also warned that depriving global markets of Iranian exports could send oil prices sharply higher, gifting

Tehran a funding boost.



The attacks on the UK embassy in Tehran has led to Iranian diplomats being expelled from the UK Unless a compromise is reached, the president will have to decide whether to veto it.

The US has already forbidden its own banks from dealing directly with the Iranian central bank.

Under the new sanctions, drafted by Democrat Robert Menendez and Republican Mark Kirk, foreign banks that do business with Iran's central bank would be cut off from the US financial system.

The sanctions are designed to come into effect after a six-month grace period - in order to give oil markets time to factor them in.

The measures were part of a much larger \$662bn (£422bn) defence bill, which also cruised through the Senate on Thursday night.

Europe's new sanctions blacklist 180 Iranian officials and firms, but do not impose an oil embargo on Iran, because some European countries are dependent on Iranian oil.

Ministers meeting in Brussels also agreed on Thursday to work on other measures targeting Iran's energy sector.

The latest round of sanctions follow a recent UN report that linked Iran with the development of a nuclear weapon.

Tehran insists its nuclear programme is strictly for civilian purposes.

Officials say the latest round of sanctions is not related to this week's storming of the UK embassy in Iran.

The British government says all UK diplomatic staff in Tehran have been evacuated and the embassy closed.

Iran has said it regretted the incident, which it described as "unacceptable behaviour by a small number of protesters".

1 December 2011 Last updated at 15:26 GMT

EU to slap new sanctions on Iran's officials and firms



Iran insists its nuclear programme is for peaceful purposes only

The European Union has agreed to impose fresh sanctions on 180 Iranian officials and firms over Tehran's controversial nuclear programme.

Ministers meeting in Brussels also agreed to work on other measures that could target Iran's energy sector.

The sanctions follow a UN report linking Iran to the development of a nuclear weapon. Iran denies the claims.

The EU measures also come two days after hundreds of Iranian protesters stormed the UK embassy in Tehran.

Britain announced on Wednesday it was expelling all Iranian diplomats from London, after pulling its own out of Tehran.

A spokesman for EU foreign policy chief Catherine Ashton told the BBC that the new sanctions would target 39 people and 141 companies and would include the freezing of assets and travel bans.

[EU ministers said in a statement](#): "The council agreed to broaden existing sanctions by examining, in close co-ordination with international partners, additional measures including measures aimed at severely affecting the Iranian financial system, in the transport sector, in the energy sector."

Analysis

Jonathan Marcus BBC Diplomatic Correspondent

There's no doubt that sanctions are having an impact on Iran's economy, but it is hard to see any sign that they have caused anyone in Tehran to re-think Iran's nuclear programme.

US and UK financial sanctions have made it harder to do business with Iran, but there are ways around that. China - whose role in the Iranian economy is growing rapidly both as a purchaser of oil and a supplier of goods and services - has explored simple barter deals with Tehran.

Western sanctions could still go further. There could be an EU embargo on oil imports from Iran, but that would have a significant impact on a small number of already weak European economies. It's a step too far for the EU - at least for now.

With Russia and China eager to keep their economic ties with Tehran open, it is hard to see the sanctions route succeeding.

Sanctions send important signals to the Iranian regime. They make its life more difficult. But in themselves they do not look set to halt Iran's nuclear ambitions.

Correspondents say foreign ministers failed to agree on an oil embargo against Iran because some EU countries are dependent on Iranian oil.

Ministers said a decision on future measures would be taken no later than January.

Officials say the latest sanctions are not linked to the storming of the British Embassy in Tehran on Tuesday.

However, ministers denounced the attack and said the EU would take "appropriate measures in response".

The statement did not specify what those would be.

Ahead of the Brussels talks, UK Foreign Secretary William Hague said he wanted "an intensification of the economic pressure", particularly the isolation of Iran's financial sector.

'Nuclear device'

Last week the US, Canada and the UK announced new sanctions against Iran in the wake of the report from the UN nuclear watchdog, the International Atomic Energy Agency (IAEA), that said Iran had carried out tests related to "development of a nuclear device".



EU foreign policy chief, Catherine Ashton: "The Council is outraged by the attack on the British embassy in Tehran and utterly condemns it"

Tehran insists that its nuclear programme is solely for peaceful purposes.

The 27-member EU has already frozen the assets of hundreds of Iranian companies and has adopted measures to prevent new investment and technological assistance to Iran's gas producing and refining industry.

The EU is yet to release details about the 180 officials and entities targeted by the sanctions.

Despite the IAEA report, Iran was not referred to the UN Security Council because Russia and China were opposed to the move.

Iran expressed regret for the attack on the UK embassy - and another UK diplomatic compound in Tehran - and said a number of protesters had been arrested.

However, the semi-official Fars news agency said on Thursday that police had freed 11 people held over the attacks. There was no explanation for their release.

30 November 2011 Last updated at 16:06 GMT

Image captures Iran military base explosion damage

Use the slider to see how the base looked before the explosion





A satellite image has captured apparently extensive damage from an explosion at a military base near Tehran earlier this month.

Some buildings at the Revolutionary Guards base seem to have been completely destroyed in the explosion.

The 12 November blast killed 17 soldiers and has been widely blamed in Iran on foreign intelligence services.

On Monday, another in a series of unexplained explosions was reported in central Isfahan province.

They come at a time of heightened tensions over Iran's nuclear ambitions.

US and European powers fear that Iran is trying to develop a nuclear weapon, though Iran says its nuclear programme is purely for peaceful purposes.

There has also been speculation in Israel's media that Prime Minister Benjamin Netanyahu is considering ordering strikes against Iran's nuclear sites, in the hope of stalling or ending its programme.

'Missile work'

The 12 November blast, which occurred about 40 km (25 miles) away from Tehran, was described at the time by the Revolutionary Guards as an accident, while one local member of parliament said an ammunition depot had exploded.



Gen Hassan Tehrani Moghaddam was one of those killed in the blast near Tehran

An elite military force, the Revolutionary Guard was set up shortly after the 1979 Iranian revolution to defend the country's Islamic system.

It has been targeted by UN sanctions aimed at pressuring Iran to halt uranium enrichment.

The images of damage at the site were released by the Washington-based [Institute for Science and International Security](#).

It reported that when the explosion had happened, Iran was "apparently performing a volatile procedure involving a missile engine".

One of those killed was Gen Hassan Tehrani Moghaddam, who was said to have been working on Iran's missile programme.

Some damage seen in the image may have been caused by subsequent controlled demolition of buildings and removal of debris, the institute said.

On Monday, people in Isfahan told the BBC they had heard an explosion from the south-west - some distance from the province's declared nuclear facilities in the east.

Iranian media reports quoted the deputy governor-general of Isfahan province as confirming, then denying, that there had been an explosion.

22 November 2011 Last updated at 16:21 GMT

Iran: New Western nuclear sanctions 'in vain'



Iran said the new sanctions would unite its people behind the nuclear programme

Iran has dismissed new Western sanctions imposed against it because of growing concerns about its nuclear programme.

A senior Iranian official said the sanctions would unite the Iranian people, would have no impact and would be "in vain".

On Monday, the US, UK and Canada announced new measures targeting Iran.

Russia has described the new sanctions as "unacceptable and against international law".

An Iranian Foreign Ministry spokesman, Ramin Mehmanparast, told a news conference in Tehran that the West's attempts to isolate Iran's economy would only serve to unite Iranians behind their government's nuclear programme.

"If our people feel that enemies want to deprive them of their rights by threatening, bullying and adopting illegal and irrational methods, they will pursue the path that they have taken, more united and more determined than ever," he said.

A UN report published two weeks ago gave the strongest evidence yet that Iran is seeking nuclear weapons, but Iran

denies this.

Tehran insists its nuclear programme is solely for civilian purposes.

The report, by the UN's nuclear watchdog (IAEA), said Iran had carried out tests "relevant to the development of a nuclear device", but Iran was not referred to the UN Security Council because Russia and China were opposed to the move.

'Ratcheting-up of pressure'



Hillary Clinton said the US expected more sanctions against Iran

The speaker of the Iranian parliament, Ali Larijani, said Iran would retaliate "tit-for-tat" and Iran's deputy oil minister, Abdolhossein Bayat, said the sanctions would not stop Iran exporting petrochemicals to the European Union.

Earlier, Russia condemned the sanctions, saying the action "seriously complicates moves for constructive dialogue with Tehran".

On Monday, the UK said it was cutting all ties with Iranian banks, while Canada said it was banning exports for the petrochemical, oil and gas industries.

US Secretary of State Hillary Clinton spoke of a "significant ratcheting-up of pressure" on Iran.

Iran's petrochemical industry, oil and gas industry and financial sector would be targeted by the new sanctions, the US said.

[Continue reading the main story](#)

The West's 21 November sanctions against Iran

- The US named Iran as an area of "primary money laundering concern" to dissuade non-US banks from dealing with Tehran. It also blacklisted 11 entities suspected of aiding Iran's nuclear programme. Expanded sanctions to target companies that aid Iran's oil and petrochemical industries.
- Britain ordered all British financial institutions to stop doing business with their Iranian counterparts, including the central bank.
- Canada said it would immediately ban the export to Iran of all goods used in the petrochemical, oil and gas industries.
- [Source: US Treasury](#)

The US also named Iran a "primary money laundering concern".

President Barack Obama said in a written statement that the US had identified "the entire Iranian banking sector - including the Central Bank of Iran - as a threat to governments or financial institutions that do business with Iranian banks".

British Chancellor George Osborne said that all UK credit and financial institutions had to cease trading with Iran's banks from Monday afternoon.

The UN Security Council has already passed four rounds of sanctions against Iran for refusing to halt uranium enrichment.

Highly enriched uranium can be processed into nuclear weapons.

The US had already sanctioned dozens of Iranian government agencies, officials and businesses over the nuclear programme.

21 November 2011 Last updated at 22:59 GMT

Iran faces fresh Western sanctions over nuclear plans



Iran insists its nuclear programme is for peaceful purposes only

The US, UK and Canada have announced new sanctions against Iran amid growing concern over its nuclear programme.

US Secretary of State Hillary Clinton spoke of a "significant ratcheting-up of pressure" on Iran.

The UK said earlier it was cutting all ties with Iranian banks, while Canada said it was banning exports for the petrochemical, oil and gas industries.

A UN report has given the strongest evidence yet that Iran is seeking nuclear weapons, but Iran denies this.

Tehran insists its nuclear programme is solely for civilian purposes.

The report, by the UN's nuclear watchdog (IAEA), said Iran had carried out tests "relevant to the development of a nuclear device".

But despite the report, Iran was not referred to the UN Security Council because Russia and China were opposed to the move.

'International isolation'

Mrs Clinton said that Iran's petrochemical industry, oil and gas industry and financial sector would be targeted by the sanctions.

Speaking at a news conference at the State Department in Washington, she said the US expected "additional sanctions" by other countries in the days ahead.

The US also named Iran a "primary money laundering concern".

The US Treasury Secretary, Timothy Geithner, who appeared with Mrs Clinton at the news conference, warned that international banks should be wary of doing any business with Iran that might aid its nuclear programme.

"Financial institutions around the world should think hard about the risks of doing business with Iran," Mr Geithner said.

President Barack Obama said in a written statement that the United States had identified "the entire Iranian banking sector - including the Central Bank of Iran - as a threat to governments or financial institutions that do business with Iranian banks".

"As long as Iran continues down this dangerous path, the United States will continue to find ways, both in concert with our partners and through our own actions, to isolate and increase the pressure upon the Iranian regime," he said.

The British Chancellor of the Exchequer, George Osborne, had earlier said that all UK credit and financial institutions had to cease trading with Iran's banks from Monday afternoon.

"We believe that the Iranian regime's actions pose a significant threat to the UK's national security and the international community," he said.

"Today's announcement is a further step to preventing the Iranian regime from acquiring nuclear weapons."

It is the first time the UK has cut off a country's banking sector in this way.

The UN Security Council has already passed four rounds of sanctions against Iran for refusing to halt uranium enrichment.

Highly enriched uranium can be processed into nuclear weapons.

The US has already slapped sanctions on dozens of Iranian government agencies, officials and businesses over the nuclear programme.

Reports: US weighs new Iran penalties

Sanctions to target petrochemical industry in the wake of IAEA report on Iran's atomic programme, sources say.

Last Modified: 19 Nov 2011 07:22



The US wants to send Iran a strong message following the publication of the IAEA report issued last week [EPA]

The US intends to sanction Iran's petrochemical industry, sources familiar with the matter say, seeking to raise pressure on the Islamic republic after fresh allegations it may be pursuing nuclear weapons.

The sources said on Friday that the US wants to send a strong signal after the IAEA, the Vienna-based UN nuclear watchdog, issued a report on November 8 saying that Iran appeared to have worked on designing an atomic bomb and may still be secretly carrying out related research.

The sources, who said the sanctions could be unveiled as early as Monday, said that the US wanted to find a way to bar foreign companies from aiding Iran's petrochemical industry with the threat of depriving them access to the US market.

While European nations typically resent "extra-territorial" US sanctions on their companies, the sources, who spoke on condition of anonymity, said in this case the Europeans would probably follow suit, though not immediately.

US firms are barred from most trade with Iran. The US push is therefore aimed at foreign firms by in effect making them

choose between working with Iran's petrochemical industry or doing business in the vast US market.

It was not clear what authorities the Obama administration planned to invoke to impose the sanctions or precisely how, and how much, they would hurt Iran's petrochemical sector.

Israeli media speculation

Discussion of the idea comes amid Israeli media speculation about the possibility of a military strike to try to destroy Iran's nuclear facilities.

The US suspects Iran may be using its civil nuclear programme as a cover to develop nuclear weapons. Iran has insisted its programme is purely peaceful.

Last year the US congress approved sanctions that targeted Iran's energy and banking sectors, threatening to penalise foreign companies that did business with Tehran.

Those sanctions took particular aim at Iran's ability to refine crude oil into petroleum products such as petrol.

The sources said there had also been discussion of sanctions on the Iranian financial sector, possibly by limiting certain transactions through the Iranian central bank, but not through a blanket effort to cut it off entirely.

While US officials last week said the idea of cutting off the Iranian central bank entirely was off the table for now, several sources said there had been consideration of more limited measures.

The sources said the US was reluctant to try to cut off the Iranian central bank for fear this could drive oil prices dramatically higher, potentially impairing the US recovery.

The US and its European allies, notably Britain, France and Germany, are seeking ways to raise the pressure on Iran without going to the UN Security Council, where fresh sanctions are all but sure to be opposed by Russia and China.

The Security Council has passed four resolutions imposing sanctions on Iran but both Russia and China have made clear their reluctance to go further for now.

The IAEA's board passed [a resolution on Friday condemning](#) Iran's nuclear activities following its critical report, but stopped short of setting a deadline for Iran to comply.

Iran, which denies it wants nuclear weapons, has condemned the IAEA's findings as "unbalanced" and "politically motivated."

Pressure to sanction

There has been growing pressure from the US congress and prominent Republicans, including presidential candidate and Rick Perry, the Texas governor, and Condoleezza Rice, the US secretary of state, to sanction the Iranian central bank.

Perry advocated the idea in a televised debate on Saturday while Rice did so in an interview with Reuters on Wednesday.

"There is time for diplomacy but it better be pretty coercive diplomacy at this point," she told the Reuters news agency. "There are many things we could do even without probably the Security Council: sanction the Iranian central bank, deny them access to the financial system through that."

US congressional pressure is also building on the issue.

Mark Kirk, a Republican senator, introduced this week an amendment he says is intended to "collapse" Iran's central bank. His amendment would place sanctions on foreign financial institutions that do business with Iran's central bank.

A similar proposal by the Democratic congressman, Howard Berman, already has passed a House committee.

One source said that the Obama administration is looking for ways to narrowly target any sanctions that may touch on the Iranian central bank partly to forestall what are seen as much more far-reaching proposals in congress.

18 November 2011 Last updated at 20:18 GMT

UN voices 'deep concern' over Iran's nuclear plans



Iranian IAEA envoy Ali Ashgar Soltanieh dismissed the resolution

The UN's nuclear watchdog has passed a resolution expressing "deep and increasing concern" about Iran's nuclear programme.

The IAEA resolution called on Iran to clear up outstanding questions about its nuclear capabilities, but did not refer it to the UN Security Council.

A recent IAEA report said Iran had carried out tests "relevant to the development of a nuclear device".

Iran's IAEA envoy said the resolution would only strengthen Iran's resolve.

"It will be business as usual... We will continue our work as before," Ali Ashgar Soltanieh told reporters.

Iran insists that it is enriching uranium only to use as fuel for nuclear power stations. However, the US and its allies believe it is trying to develop a nuclear weapon.

The resolution was adopted by 32 votes against two - Cuba and Ecuador - at an IAEA meeting in Vienna.

The IAEA has been debating its recent hard-hitting report on Iran - released last week in the Austrian capital.

Analysis



James Reynolds BBC Iran correspondent

The IAEA board has voted to express its deep concern about Iran and asked Director General Yukiya Amano to report back in March. But it has not referring Iran to the UN for further sanctions. In other words, criticism but no immediate action.

This is the result of a compromise agreed among the six countries which routinely take the lead in talks with Iran - the US, the UK, France, Germany, Russia, and China. The four Western countries would have preferred moves towards more sanctions but Russia and China said no. Instead, a resolution criticising Iran was drawn up.

Western diplomats are happy that the six countries have agreed a single response to Iran. But it is not yet clear what kind of impact a statement of criticism will have on the government of the Islamic Republic.

The resolution asks Iran to clarify matters "to exclude the existence of possible military dimensions" to its nuclear programme.

The document also says it is "essential for Iran and the agency to intensify their dialogue".

BBC diplomatic correspondent Jonathan Marcus says the resolution - drawn up by the US, Britain, China, France, Russia, and also Germany - is essentially a trade-off.

Russia and China have come on board to share in the concern about Iran, but the resolution itself is thus less tough than the US and its allies would have wanted, he says.

US envoy to the IAEA Glyn Davies rejected criticism that the resolution was too weak.

"This resolution... gives us the tools we need to get the job done," he said.

The White House also welcomed the IAEA resolution.

Spokesman Jay Carney said it exposed "the hollowness of Iran's claims" that its nuclear programme was purely for civilian

purposes.

Tehran has remained defiant over its nuclear programme, threatening to take legal action against the IAEA for issuing its recent report.

Iran alleged that the report's findings were made under political pressure from the US.

The IAEA has proposed sending a high-level mission to Iran to address the fears.

17 November 2011 Last updated at 16:59 GMT

Iran nuclear issue is 'deep concern' - world powers



Mr Amano says there is information Iran has carried out activities relevant to the development of a bomb

World powers have agreed a draft resolution, which expresses "increasing concern" over Iran's controversial nuclear programme.

The document by the five permanent members of the UN Security Council and Germany comes amid fears of "possible military dimensions" to the programme.

The text is to be discussed at a meeting of the UN nuclear watchdog, the IAEA, later this week.

The IAEA proposes sending a high-level mission to Iran to address the fears.

Tehran says its programme is for peaceful purposes.

'Restoring confidence'

The draft resolution was hammered out by Britain, China, France, Russia, the US and also Germany on Thursday in Vienna, as the International Atomic Energy Agency continues to debate the latest report on Iran released last week in the Austrian capital.

[Continue reading the main story](#)

Analysis



James Reynolds BBC Iran correspondent

The IAEA's board of governors is made up of representatives from 35 countries.

But essentially just six of these countries get to decide how to deal with Iran: the US, the UK, France, Germany, Russia and China.

In recent years, negotiators from these countries have taken the lead in deciding when to talk to Iran, and when to impose sanctions.

This IAEA board meeting presents a straightforward test: Can the six agree a single response ?

The four Western countries would prefer moves towards further sanctions against Iran. But Russia and China are much more reluctant.

The draft resolution is a compromise - but it means that the six stay together.

The draft expresses "deep and increasing concern about the unresolved issues regarding the Iranian nuclear programme,

including those which need to be clarified to exclude the existence of possible military dimensions".

The document also "calls on Iran to engage seriously and without preconditions in talks aimed at restoring international confidence in the exclusively peaceful nature" of Tehran's programme.

However, it stops short of reporting Iran to the UN Security Council, which could impose more sanctions, the BBC's Bethany Bell in Vienna reports.

IAEA Director General Yukiya Amano earlier said that there might be undeclared nuclear material and activities.

"Our technical experts have spent years painstakingly and objectively analysing a huge quantity of information from a wide variety of independent sources, including from a number of member states, from the agency's own efforts and from information provided by Iran itself. The agency finds the information to be, overall, credible," Mr Amano [said in a statement](#).

"It is consistent in terms of technical content, individuals and organisations involved, and timeframes. The information indicates that Iran has carried out activities relevant to the development of a nuclear explosive device."

Mr Amano expressed hope that a date for the the proposed mission to Iran would be agreed soon.

The US and its allies want to see stronger sanctions imposed on Iran, but Russia believes the report contains no new evidence - and could hurt the chances for diplomacy, our correspondent says.

China says sanctions cannot resolve the issue.

'Accident'

On Wednesday, Iranian General Hassan Firouzabadi said that - contrary to speculation - the US and Israel were not behind a weekend munitions base blast that killed 17 Revolutionary Guards, including a key ballistics missile expert.

"This recent incident and blast has no link to Israel or America, but the outcome of the research, in which the incident happened as a consequence, could be a strong smack to the mouth of Israel and its occupying regime," Gen Firouzabadi was quoted as saying by the student news agency Isna.

Iranian officials had previously said the accident happened while munitions were being moved at the base, without linking it directly to weapons research.

Brig Gen Hassan Moqaddam, who was considered a key figure in Iran's missile programme, was the most senior casualty in the incident.

Iran's nuclear plan revealed

Report paints detailed picture of nation's intention to build a warhead.

- [Geoff Brumfiel](#)

14 November 2011

A report released last week by the International Atomic Energy Agency (IAEA) on Iran's alleged research into nuclear weapons assembles old intelligence into the sharpest picture yet of the weapon that Iran hopes to develop.

The 8 November report is also the IAEA's strongest statement to date that Iran's activities violate the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), which explicitly prohibits the development of weapons.

It "contains no new information", says Ali Vaez, director of the 'Iran Project' at the Federation of American Scientists, a think tank based in Washington DC. But by focusing on what is known about Iran's efforts to build or buy the technologies needed for a bomb, the report suggests that the country is working towards a relatively sophisticated device that could fit on board a medium-range ballistic missile — making it much more difficult to intercept and destroy than one delivered by an aeroplane.

Related content

- [Clash over Iran's capability](#)
- [Iranian nuclear scientists attacked](#)
- [Scientific steps to nuclear disarmament](#)
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The IAEA, an organization based in Vienna that monitors the nuclear facilities of NPT signatories, has been monitoring

Iran's uranium-enrichment facilities for more than a decade. Those facilities use centrifuges to concentrate the fissile uranium-235 isotope, which makes up less than 1% of natural uranium. When enriched to 3.5–5% of the isotope, uranium can serve as a nuclear fuel; above 90%, it can be used to make a nuclear bomb.

Iran has insisted that its centrifuges are only making fuel-grade uranium, and it has given IAEA inspectors limited access to its facilities. But many questions remain about the nation's activities and plans to expand its enrichment programme, and most of the IAEA's reports on Iran have focused on those efforts.

Last week's report, however, described what is known about Iran's development of the technologies needed for a nuclear weapon. This includes techniques for shaping uranium metal, something that is not usually needed in civilian nuclear reactors but is required to make the precisely machined components that can power a nuclear explosion.

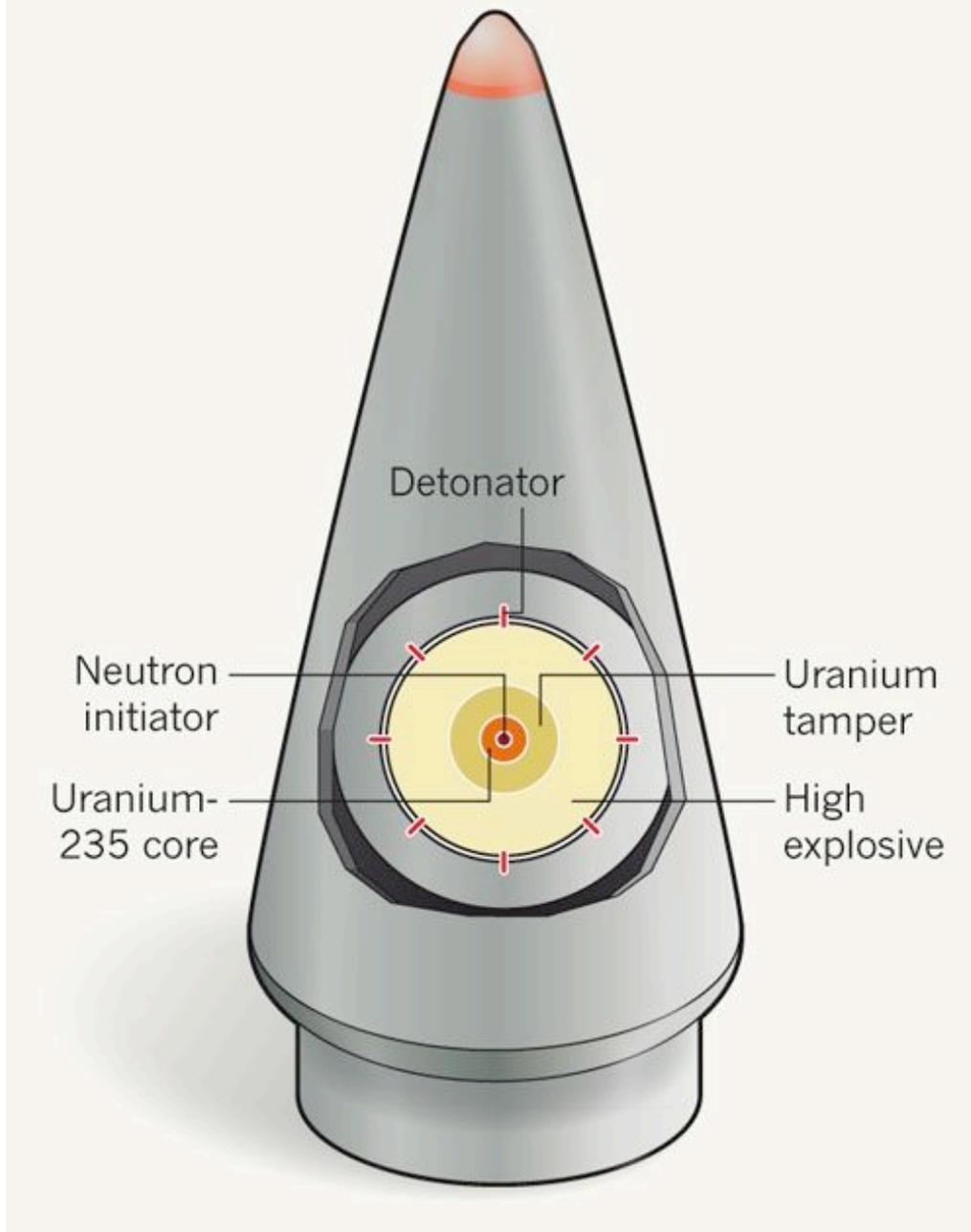
“Political allegiances will always trump technical details.”

Iranian researchers have also been testing high explosives on tungsten, a dense metal that can serve as a surrogate for uranium. Such studies would be needed if they wanted to compress uranium to the critical mass needed for a self-sustaining nuclear reaction. And they have been looking at devices that, when compressed rapidly, produce bursts of neutrons that could trigger a nuclear chain reaction. The mass and shape of the materials tested seem to be designed to fit atop the Shahab-3, a medium-range ballistic missile developed by Iran.

The agency says that much of the work has been done at the Malek-Ashtar University of Technology in Tehran, but Shahid Beheshti University and Amirkabir University of Technology have also been implicated. A year ago, Majid Shahriari, a nuclear physicist at Shahid Beheshti University, was killed in a bombing by unknown assassins (see [Nature 468, 607; 2010](#)).

IRAN'S NUKE

A report from the International Atomic Energy Agency suggests that Iran has been developing a nuclear weapon, based on a uranium implosion device, that would fit atop the Shahab-3 missile.



Weapon design

The work outlined in the report suggests that Iran aims to create a weapon with an “implosion” design, says James Acton, a physicist with the Carnegie Endowment for International Peace, a non-profit think tank in Washington DC. The bomb

would be detonated by high explosives surrounding a hollow sphere of highly enriched uranium (see [‘Iran’s nuke’](#)). The core of the sphere would carry a small neutron initiator, possibly made of uranium and the heavy hydrogen isotope, deuterium.

When the explosives detonate in unison, they compress the sphere, squeezing the uranium to its critical mass. Near the point of maximum compression, the deuterium nuclei in the centre would fuse, releasing a burst of neutrons that would trigger the nuclear explosion. The device may also have an outer shell, or ‘tamper’, of low-enriched uranium, designed to hold the weapon together for a fraction of a second longer, further boosting its yield. Acton guesses that this kind of weapon could have a yield of around 10–30 kilotonnes of TNT equivalent, roughly the same as the bomb that fell on Nagasaki in Japan in 1945.

The advantage of the design is that it makes efficient use of uranium-235, so the device would be small enough to fit on a missile. The approach is similar to Pakistan’s early warheads, which were also thought to be uranium-based. Unlike the warheads of the major nuclear countries, the Iranian design would not contain a second fusion stage, which can boost a weapon’s yield into the 100-kilotonne range.

But even a simple implosion device is not an easy option. If the high explosives aren’t detonated simultaneously, then the bomb will fail to explode properly and won’t deliver its maximum yield. Many observers believe that this was the fate of North Korea’s first nuclear test, conducted in 2006 (see [Nature 443, 610–611; 2006](#)), although a second test in 2009 seems to have been more successful.

Iran’s choice of uranium could also complicate its nuclear efforts. Most nuclear weapons use plutonium-239, because it captures neutrons better and emits more neutrons as it splits, giving it greater explosive power. The advantage of uranium over plutonium, however, is that it requires smaller production facilities, which are easier to hide.

Some analysts, including Vaez, are unimpressed by the IAEA’s latest report, saying that much of the content dates from the turn of the millennium, and that it does not indicate how far the programme has progressed. But Vaez notes that “it is unprecedented in the scale and scope of the detailed information that it has bared to the public”. That suggests to him that it may be a political push to encourage Russia and China to impose sanctions against Iran.

Acton agrees, although he adds that the report is unlikely to have that effect. For the countries that support Iran’s right to enrich uranium for civilian use, political allegiances will always trump technical details, he says. “More evidence is not going to necessarily lead them to change their positions.”

15 November 2011 Last updated at 16:42 GMT

Is Iran already under covert attack?

By Frank Gardner BBC security correspondent



Seventeen Revolutionary Guards were killed in the explosion at Bid Ganeh at the weekend

Assassinations of nuclear scientists, a sophisticated cyber-attack, and now, last weekend, a mysterious blast at a munitions base that has killed the "godfather" of Iran's ballistic missile programme.

The explosion at the Bid Ganeh base was so powerful, it killed 17 Revolutionary Guards Corps soldiers and rattled windows in Tehran several miles away.

Iran says it was an accident, but few who follow events there are convinced.

The recent talk may be all about a future, desperate last-ditch military strike by Israel to destroy Iran's suspected nuclear weapons programme, but to all appearances, a covert "black ops" campaign to disrupt it has already been under way for some time.

At least three Iranian nuclear scientists have been killed in the past two years, and last winter, a computer virus codenamed Stuxnet was introduced into Iran's nuclear enrichment centrifuges, causing havoc and setting back the programme by

several months.

[Continue reading the main story](#)

“Start Quote

I don't know the extent of the explosion but, it would be desirable if they multiplied”

End Quote Ehud Barak Israeli defence minister

Mahan Abedin, editor of Terrorism Monitor published by the Jamestown Foundation, says: "The assassination of Iran's scientists and the introduction of the Stuxnet computer virus last year constitute state terrorism."

No-one, of course, is claiming responsibility for these actions, but US intelligence is widely believed to have had a hand in developing the Stuxnet virus, while Iranian officials have previously accused Israel of being behind the assassinations.

Of all the countries in the region to feel threatened by Iran, Israel is most alarmed by the Iranian nuclear programme.

On Sunday Israeli Defence Minister Ehud Barak said of the explosion at the base: "I don't know the extent of the explosion but, it would be desirable if they multiplied."

International concern

Plenty of other countries share Israel's concerns about Iran's growing military power, though they tend not to express it publicly.



On Tuesday, a Gulf Arab official who asked not to be named told the BBC: "We are very worried about Iran, it's getting to the point where it's a very dangerous scenario. 2012 is a crucial year when decisions are going to have to be taken".

In a cable leaked by Wikileaks, it emerged Saudi Arabia's King Abdullah had urged the US to deal decisively with Iran and stop its suspected nuclear weapons programme.

The Saudi monarch used the poetic language of the Nejd desert, urging Washington to "cut off the head of the snake".

The UAE, involved in a long-running territorial dispute with Iran over three Gulf islands, has also been quietly urging the West to contain Iran and stop it acquiring a nuclear bomb.

Bahrain's Sunni monarchy also sees Iran as essentially a hostile neighbour bent on stirring up Bahrain's Shia majority and encouraging it to press for an Islamic republic.

Last week, the Bahrain government announced it had uncovered a terrorist plot to blow up the causeway linking it to Saudi Arabia, adding that the suspects had links to Iran.

'Latent capability'

But at a forum on Iran hosted in London on Monday by the International Institute of Strategic Studies (IISS), many voiced the view that Iran was hell-bent on acquiring the nuclear bomb and there was very little that was going to deflect it.

Referring to the steady ratcheting up of Western sanctions on Iran, Sir Richard Dalton, the UK's ambassador to Tehran from 2002-06, said: "There is no sanctions policy out there that will change Iran's behaviour."

However he questioned the benefit of the apparent covert action against Iran, saying "whoever is behind these actions needs to make the case for them publicly, and I'm not sure at all that that case holds water."

Mr Abedin said: "No tool, no pressure, not even the toughest of sanctions, nor even military conflict will work [to steer Iran away from becoming a nuclear weapons power]."

Mark Fitzpatrick, the IISS resident expert on Iran's nuclear programme, is in no doubt which direction Iran is heading.

He told the forum: "I think Iran probably already has a latent nuclear weapons capability."

Published online 30 November 2010 | Nature 468, 607 (2010) | doi:10.1038/468607a

News

Iranian nuclear scientists attacked

Murder and cyber-assault target nuclear programme.

Declan Butler



Majid Shahriari (above) was killed, and Fereydoun Abbasi-Davani (below) injured, in bomb blasts. Press TV; (bottom inset): Mashregh News

The killing of an Iranian physicist and injury of another in separate bomb attacks earlier this week in Tehran are fuelling speculation about the implications for Iran's nuclear programme. The news follows hard on the heels of an admission by the Iranian regime that a computer worm had interfered with uranium enrichment at its nuclear facility in Natanz. Iran claims the enrichment is to provide fuel for civilian nuclear power stations, but the once-secret programme — which has repeatedly violated the nuclear safeguard obligations of the International Atomic Energy Agency — is widely seen as an effort to furnish the country with nuclear weapons.

The bombings have had a chilling effect on Iran's physicists. "I am shocked, really deeply shocked," says one, who wished to remain anonymous, given the repressive regime.

Majid Shahriari was killed, and his wife injured, on his way to work at the Shahid Beheshti University in Tehran when attackers on motorcycles attached a bomb to his car on 29 November. Another nuclear scientist, Fereydoun Abbasi-Davani, and his wife, survived an identical simultaneous attack.

Mahmoud Ahmadinejad, who hung onto power as president after a disputed election in June 2009, immediately laid blame on the West and Israel. "The Western governments and the Zionist regime have a hand in the assassination of the two Iranian university professors," he asserted at a press conference in Tehran hours after the attacks. "They will not be able to stop the Iranian nation's activities by such acts."

Abbasi-Davani, whose handful of publications on neutron physics are mainly in Iranian journals, is a key figure in Iran's nuclear programme. He is reported to be a scientist at the country's defence ministry, and a member of Iran's revolutionary guards since the 1979 Islamic Revolution. He was also named as being among "Persons involved in nuclear or ballistic missile activities" in the 2007 UN Security Council Resolution 1747, which imposed sanctions on Iran over its refusal to stop enrichment of uranium.

Nature has been unable to establish whether Shahriari — who published several papers on nuclear reactor physics and nuclear medicine in international peer-reviewed journals — had any links to the enrichment programme. Shahriari was part of the Iranian delegation on the board of a 'science for peace' project, the non-nuclear SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East) facility, in Alaan, Jordan. SESAME, which opened in 2008 and is the Middle East's first synchrotron, is intended to promote peace through cooperation among member countries in the region, including Israel. But physicist Christopher Llewellyn Smith, president of SESAME's council, says that he has little recollection of Shahriari, and records show he attended only one board meeting, at the opening of the SESAME building.

Although Shahriari's murder is unlikely to be connected with his involvement in SESAME, he is the second member of the project's council to be assassinated. In January 2009, Masoud Alimohammadi, a particle physicist at the University of Tehran and one of Iran's representatives on the board, was also killed by a bomb as he got into his car (see [Nature 463, 279; 2010](#)). His work on theoretical particle physics was far removed from nuclear matters, leading researchers to speculate that he had been killed by hardliners in the Ahmadinejad regime in response to Alimohammadi's support for the reformist movement. This week's attacks, in contrast, bear the hallmarks of a hit by foreign powers, speculates one Iranian expatriate

researcher.

Meanwhile, Iran acknowledged for the first time in late November that the sophisticated computer worm Stuxnet was deployed in the Natanz attack. The worm seems to have been designed specifically to damage the centrifuges used for enrichment, potentially causing them to run or brake too quickly. A 23 November report by the International Atomic Energy Agency on Iran's nuclear activities at Natanz noted a temporary shutdown of the plant earlier this month. While conceding the attack, Ahmadinejad claimed on 29 November that any impact had been limited.

Iran may reconsider atomic watchdog cooperation

By the CNN Wire Staff

November 14, 2011 -- Updated 2226 GMT (0626 HKT)



Fareed's Take: Iran's nuclear program

STORY HIGHLIGHTS

- **NEW:** Israel's president says "what is lacking very much is a(n) attack in moral sense" on Iran
- Russia says it will not support new sanctions
- Germany will not take part in discussions about military action
- Iran calls IAEA report on its nuclear program "politically motivated"

(CNN) -- Iranian lawmakers want Tehran to reassess its cooperation with the U.N. atomic agency after the latter published what Iran calls a "politically motivated" report on its nuclear program, state-run Press TV reported

Ali Larijani, speaker of the parliament, said Sunday the report by the International Atomic Energy Agency was based on outdated information from the United States and Israel.

"I think we should seriously reconsider our cooperation," according parliament member Siamak Mareh Sedq, who said the negatives of IAEA membership outweigh positives.

"Anyone in his right mind will think twice before becoming a member of such an organization," lawmaker Mehdi Kouchakzadeh said.

Mohammad-Hassan Aboutorabi-Fard, vice speaker of the parliament, suggested a different approach.

"I think we must work with the IAEA. This way we can continue to prove that the agency has no independence," Aboutorabi-Fard said. "The opposite is also true; as a member we can help the agency revise its policies and become politically independent and effective as an international body."

According to the report released last week, Iran is believed to have continued weapons research and technology development after 2003, when the intelligence community thought it had stopped. Instead of halting, it seems Iran took a

hiatus, although the program has progressed at a more modest pace since then, the report said.

Iran has always said its nuclear program is for peaceful purposes.

Iran has very likely undertaken engineering studies on arming long-range missiles with a nuclear payload, according to the IAEA report, a possibility that has left Israel ill at ease.

The Jewish state has warned it will consider all options to confront its arch nemesis.

But Israeli President Shimon Peres would not want to see military force used "immediately," he told CNN's Piers Morgan in an interview Monday.

"I would rather prefer to see a tighter economic sanction, a closer political pressure, and what is lacking very much is a(n) attack in moral sense, because Iran is a spoiled country," the Israeli leader said. "It's morally corrupt."

Peres accused Iran of supporting terrorism internationally and of being the only country "that threatens to destroy another country openly."

President Barack Obama said Sunday that the United States continues to work with the international community, especially Russia and China, to isolate Iran and strengthen sanctions against them.

"I have said repeatedly and I will say it today, we are not taking any options off the table, because it's my firm belief that an Iran with a nuclear weapon would pose a security threat not only to the region but also to the United States," Obama said during a news conference after the Asia-Pacific Economic Cooperation summit in Hawaii.

"But our strong preference is to have Iran meet its international obligations, negotiate diplomatically, to allow them to have peaceful use of nuclear energy in accordance with international law, but at the same time, forswear the weaponization of nuclear power."

The United States will continue to consult with Russia and China in the coming weeks on possible options available, Obama said. The three nations agree that they don't want a nuclear arms race triggered in the region, according to the president.

Russian Foreign Minister Sergey Lavrov said Monday that Russia will not support new sanctions.

"I think that the campaign (around the IAEA report) might have been orchestrated to stir up passions and to prepare the ground for new unilateral sanctions. We think that the potential of sanctions against Iran has been spent," he said, according to the Interfax news agency.

"It's clear that Iran is trying to achieve a nuclear weapon and Iran needs to be stopped," Tzipi Livni, an Israeli opposition leader and former foreign minister, said last week. "Iran needs to understand ... that all options are on the table."

But Germany on Monday said it will not take part in discussions about military action.

"We think such discussions are counterproductive and even dangerous," said Foreign Minister Guido Westerwelle.

Russian scientist Vyacheslav Danilenko's aid to Iran offers peek at nuclear program

By Joby Warrick, Monday, November 14, 2:11 PM

When the Cold War abruptly ended in 1991, Vyacheslav Danilenko was a Soviet weapons scientist in need of a new line of work. At 57, he had three decades of experience inside a top-secret nuclear facility, and one marketable skill: the ability to make objects blow up with nanosecond precision.

Danilenko struggled to become a businessman, traveling through Europe and even to the United States to promote an idea for using explosives to create synthetic diamonds. Finally, he turned to Iran, a country that could fully appreciate the bomb-maker's special mix of experience and talents.



(Mehdi Ghasemi/ASSOCIATED PRESS) - The reactor building of Iran's Bushehr Nuclear Power Plant is seen, just outside the port city of Bushehr, 750 miles south of the capital, Tehran, in 2009. Iran's announcement of plans to build 10 more uranium enrichment facilities is largely bluster following a strong rebuke from the U.N.'s nuclear agency, according to analysts. Nonetheless, the defiance is fueling calls among Western allies for new punitive sanctions to freeze Iran's nuclear program.

Fifteen years later, the Russian scientist has emerged as a central character in the still-unfolding mystery that is Iran's nuclear program. A [report](#) last week by the [International Atomic Energy Agency](#) highlighted the role of a "foreign expert" — identified by Western diplomats close to the U.N. nuclear agency as Danilenko — in Iran's efforts to gain expertise in disciplines essential to building a nuclear warhead.

No bomb was built, the diplomats say. But help from foreign scientists such as Danilenko enabled Iran to leapfrog over technical hurdles that otherwise could have taken years to overcome, according to former and current U.N. officials, Western diplomats and weapons experts.

[Such assistance](#) also provided a trail of evidence that the IAEA's investigators were later able to follow. Documents and other records — and, in the case of Danilenko, interviews — would offer a rare glimpse inside a highly secretive program hidden within Iranian universities and civilian institutions, the officials and experts said.

"It's like being an astronomer studying a black hole: You detect the black hole's presence by seeing what falls into it," said Art Keller, a former CIA analyst who specialized in Iran. "With covert programs, you watch for the flow of raw material and outside expertise."

The process is not infallible. Evidence is often ambiguous, as the same technology can sometimes have peaceful as well as military applications. In the case of Danilenko, the scientist's synthetic-diamonds business provided a plausible explanation for his extensive contacts with senior Iranian scientists over half a decade. Danilenko has consistently denied that he ever knowingly aided Iran's nuclear program.

"I am not a father of Iran's nuclear program," he told a Russian journalist last week. E-mails sent to Danilenko seeking comments were not answered.

For U.N. investigators, however, the Russian's influence was visible in the design and testing of an unusual, half-sphere-shaped detonator the Iranians perfected eight years ago, shortly after Danilenko left Iran for good.

Weapons experts say detonators of the type made by Iran have one known purpose: squeezing a lump of highly enriched uranium to trigger a nuclear chain reaction.

"It remains for Danilenko to explain his assistance to Iran," said [David Albright](#), a former U.N. inspector who has tracked the investigation of the Russian scientist over several years. "At the very least, Danilenko should have known exactly why the Iranians were interested in his research and expertise. The IAEA information suggests he has provided more than he has admitted."

Danilenko developed his rare expertise at an institution at the foot of the Ural Mountains in a place so secret that it was omitted from the Soviet Union's official maps. [Chelyabinsk-70](#) was one of the Soviet Union's "closed cities," and it was home to one of the country's most sensitive nuclear installations, NII-1011, now known as the All-Russian Scientific Research Institute of Technical Physics.

The institute's main mission was designing the Soviet Union's nuclear weapons. In the 1950s and early 1960s, when Danilenko began work there, its scientists were preoccupied with miniaturizing nuclear weapons so they could readily fit inside missiles, conventional bombs and even artillery shells. In doing so, they faced a significant technical challenge: creating a small but highly precise detonator of conventional explosives that could send a powerful shock wave through a core of plutonium or enriched uranium at the center of the device.

This is where Danilenko's special skills came in useful, said Albright, who co-wrote a report on Danilenko with his colleagues from the Institute for Science and International Security, a Washington-based nonprofit group specializing in the study of nuclear weapons programs.

For nearly 30 years, the ISIS report said, Danilenko's expertise in explosives and gas dynamics contributed to the design and testing of small, high-precision detonators that could produce a perfectly symmetrical shock wave needed to ensure a sustained nuclear chain reaction. A tiny lapse in timing would cause the fissile core to blow apart too soon.

Danilenko has publicly acknowledged the sensitive nature of his work at Chelyabinsk-70. In a book chapter cited by ISIS, he says that experiments he conducted were "highly classified; for security reasons, the results were initially contained only in secret reports."

The research also led to a fortuitous discovery that would affect the course of Danilenko's post-Soviet career. Russian scientists discovered that they could create synthetic diamonds by bombarding ordinary graphite with the same kinds of precision shock waves. The diamonds produced were tiny and irregular but perfect for industrial applications such as grinding and polishing.

When the Cold War ended, thousands of weapons scientists suddenly confronted a harsh choice: remain at the weapons institutes at drastically reduced wages or reinvent themselves for the post-Soviet, capitalist economy. For Danilenko, the choice was clear: His knowledge of explosively produced diamonds, called "ultra-dispersed diamonds" or "nanodiamonds," was his ticket out of Chelyabinsk-70.

Danilenko moved to Ukraine, created a company, and searched for investors and partners throughout the West, including the United States. But he struggled as a businessman, and soon his European ventures were short of cash and at risk of collapsing.

In 1995, he decided to do what numerous other Russian weapons scientists before him had done: He contacted the Iranian Embassy to inquire about possible joint ventures, according to the ISIS report, which drew from IAEA documents and interviews.

When a reply came weeks later, it was from an Iranian scientist who was well-positioned to understand Danilenko's background and what he could provide. Seyed Abbas Shahmoradi was the head of Iran's Physics Research Center, the institution that IAEA officials say was the command center for Iran's clandestine nuclear research.

"As head of Iran's secret nuclear sector involved in the development of nuclear weapons," the ISIS report said, "Shahmoradi would have undoubtedly recognized Danilenko's value."

Secret work

Danilenko's work in Iran initially centered on his diamond-making scheme. But over the course of a six-year relationship, U.N. investigators later concluded, he provided expertise that would help Iran achieve something of far greater value.

The IAEA's report cites "strong indications" that the unnamed "foreign expert" assisted Iran in developing a high-precision detonator as well as a sophisticated instrument for analyzing the shape of the explosive pulse.

The IAEA verified "through three separate routes, including the expert himself," the extensive cooperation with Iranian scientists from 1996 to 2002, the report states. While in the country ostensibly to share his techniques for nanodiamonds, the expert "also lectured on explosion physics and its applications," the IAEA report said.

U.N. investigators would eventually match Danilenko's published research on detonators with designs produced by Iranian scientists working for the Physics Research Center. In one striking example, a 1992 paper co-authored by Danilenko describes a fiber-optic instrument that measures precisely when a shock wave arrives along thousands of different points along the surface of a sphere. Iran conducted at least one major test of such an instrument in 2003, the year after Danilenko stopped his visits to Iran.

Such instruments have few, if any, applications outside nuclear warhead design, weapons experts say. Indeed, when confronted by the IAEA, Iranian nuclear officials were unable to produce an explanation for why such tests were needed. Iran has consistently denied having ambitions to build nuclear weapons.

"This type of system appears suitable for testing a sphere of conventional explosives designed to compress the fissile core of a nuclear warhead," said Josh Pollack, a government consultant and contributor to the nonproliferation blog Arms Control Wonk.

IAEA officials eventually interviewed Danilenko after his return to Russia and sought his help in clarifying what the Iranians were seeking to do with the technology. His response then was similar to his explanation last week to a Russian journalist: His work was restricted to nanodiamonds, and he had no knowledge of Iran's weapons ambitions. "I am not a

nuclear physicist," he told the Russian newspaper Kommersant.

In private conversations, however, the scientist allowed that he "could not exclude that his information was used for other purposes," the ISIS report said. In that sense, the institute said, Danilenko's experience is similar to that of numerous other former weapons scientists who ended up traveling abroad to work in a country with nuclear aspirations. Of the dozens of similar cases studied by the institute, each began with an offer of "more benign assistance that provided a plausible cover for their secret assistance."

"Synthetic diamond production is unlikely to have been a priority" for Iran, ISIS said. "Although it has obvious value as a cover story." 11 November 2011 Last updated at 04:42 GMT

US defence chief Panetta warns against Iran strike



Iran says its nuclear programme is for peaceful purposes only

The US Defence Secretary Leon Panetta has said a military strike against Iran could have "unintended consequences".

He said it would only delay Iran's nuclear efforts by three years at most.

Correspondents say the comments appear to play down speculation that a military strike might be used to cripple Tehran's nuclear programme.

On Tuesday, the UN's nuclear watchdog, the IAEA, said Iran was carrying out research aimed at developing nuclear weapons capacity.

"You've got to be careful of unintended consequences here," Mr Panetta told reporters in Washington, when asked about his concerns about a military strike.

He acknowledged military action might fail to deter Iran "from what they want to do".

"But more importantly, it could have a serious impact in the region, and it could have a serious impact on US forces in the region," he said.

"And I think all of those things need to be carefully considered."



Leon Panetta said he supported sanctions against Iran
'Toughest sanctions'

The BBC's Zoe Conway Washington says the comments go against what in some Washington circles is seen as the accepted wisdom of using the military to curtail Iran's nuclear ambitions.

Speculation had been rife in the American and Israeli media that a strike could take place, either by the Americans themselves or by Israel.

Mr Panetta said he instead supported the use of "the toughest sanctions - economic, diplomatic pressures - on Iran to

change their behaviour".

Asked what the US would do if sanctions did not force Iran to change course, he said the hope was that it would not reach that point.

Iran insists that its nuclear programme is for peaceful purposes, to generate civilian power.

In its latest and toughest report so far on Iran, the International Atomic Energy Agency (IAEA) said on Tuesday that it had information indicating Iran had carried out tests "relevant to the development of a nuclear explosive device".

The IAEA said the research includes computer models that could only be used to develop a nuclear bomb trigger.

Tehran condemned the findings of the IAEA as politically motivated.

Briefing: Iran's nuclear ambitions

- 17:54 10 November 2011 by [Andy Coghlan](#)
- For similar stories, visit the [The Nuclear Age](#) Topic Guide

The International Atomic Energy Agency says Iran has been secretly developing nuclear weapons. **New Scientist** takes closer look at its major new report

What did the International Atomic Energy Agency find?

Through various clandestine projects, it appears that Iran made concerted attempts [between 1998 and 2003 to develop a nuclear bomb](#), says the [International Atomic Energy Agency \(IAEA\)](#) in a [major report published on 8 November](#).

The report leaves several important questions unanswered, however. The big one is whether those activities have continued or resumed, and if so whether Iran now poses a genuine nuclear threat to its neighbours.

Another important question is whether Iran possesses weapons-grade enriched uranium-235, and if so how much. Nor is it clear whether the country has the capacity to produce this material.

Whatever Iran's true intentions, the IAEA's report provides unprecedented detail about the scale and ambition of Iran's original clandestine nuclear weapons programme, called "AMAD", until it was [officially halted in 2003](#). We answer some key questions here about what the IAEA found and how significant it is.

What are the most important outcomes of the IAEA's report?

Probably the most important is the rich technical detail, which provides "strong indicators" of possible nuclear weapon development in a dedicated programme leading up to 2003. By contrast, Iran has always denied that it wants to produce nuclear bombs, a claim repeated [on Al Jazeera](#) by Iranian president, Mahmoud Ahmadinejad, who maintains that the [country's nuclear programme is purely civilian](#).

If the programme was halted all that time ago, why has it taken the IAEA this long to expose it?

The IAEA says it has not had sufficient confidence in its sources to make its concerns public. However, the current report is based on information from four mutually corroborating sources.

A key source is a compendium of about 1000 pages of reports and data from a single member state, probably the US, although the agency does not say which. The IAEA also says it has corroborating information from 10 other of its member states and from data collected from its own visits and inspections in Iran. The agency also has information from Iranian officials.

Could the IAEA have been pressured to produce a report that could be used to justify military strikes against Iran?

That is possible, but unlikely. Expert commentators say that if anything the report exposes Iran's lack of progress towards making a bomb, reducing any possible justification for attacks. The US Arms Control Association based in Washington DC says that "talk of military strikes against Iranian nuclear and military targets is unhelpful and counterproductive". Much more productive, it says [in its analysis](#), would be "pursuit of a negotiated agreement" to discourage any nuclear ambitions that Iran still has.

What's needed to make a nuclear bomb?

Weapons-grade uranium or plutonium, for a start. But a host of other complex technologies is needed, too, and that's what makes the IAEA's report so intriguing. Once a country has enough uranium for a bomb, it needs to develop spherical containers in which the material can be instantaneously compressed, or imploded, so it is sufficiently dense for a nuclear

chain reaction to begin.

This compression requires microscopic detonators on the inside of the container, finely tuned to go off simultaneously and with exactly the right force to spark a nuclear explosion. A bomb also needs a source of neutrons to trigger the chain reaction.

Even if a country solves all of those problems, it needs to be sure that the bomb can survive the journey to its destination, possibly in a missile. It also needs facilities and computing programs to develop and physically test all of these technologies. The IAEA's report reveals that just about all of these technologies were under development in Iran and may still be.

What were the main developments?

Through a so-called "green salt" project, Iran sought a source of uranium suitable for enrichment to weapons-grade material. Civilian nuclear fuel contains less than 1 per cent of uranium by weight, but by repeatedly centrifuging it, the content can ultimately be concentrated to the 80 or 90 per cent needed for bombs.

Did it succeed?

Iran has built at least two facilities for fuel enrichment, at Natanz and Fordow, which [since 2005](#) have [both been generating 20-per-cent-enriched uranium](#). This is in defiance of the United Nations Security Council's demands for production to be suspended. But there's no evidence of enrichment beyond 20 per cent.

Does Iran have enough material for a bomb yet, and how soon could it make one?

If its current stockpile of enriched uranium was further enriched, it could provide enough for two weapons within about two years, according an analysis by [Mark Fitzpatrick](#) of the International Institute for Strategic Studies (IISS), a think tank based in London. But to produce a handful of warheads would require years of work in a clandestine facility. "Fortunately for the world, Iran has not been able to keep its facilities secret," he says.

How many of the other technologies vital for producing bombs has Iran been engaged in?

The IAEA found considerable evidence that Iran was developing components which could be applied in nuclear weapons. These include the sophisticated detonators needed for nuclear bombs, and "multipoint initiation systems" that refine detonation waves to produce a perfectly uniform compression of the nuclear material. The IAEA also found evidence of the high-speed cameras needed to monitor the shock waves produced by these devices.

Couldn't all these technologies be applied to civilian uses?

Possibly, but what makes the IAEA's evidence damning is that the dimensions of the hemispheres and detonators that Iran tested exactly matched those of the payload chamber of Iran's Shahab 3 missile system, which could be used to deliver a bomb.

So Iran was actively marrying all of its "bomb development" work to its missile delivery system?

Indeed. Through what became known as Project 111, researchers performed many stress experiments designed to ensure that a bomb could survive blast-off and flight.

What other evidence emerged?

Much nuclear-bomb development relies on the testing of surrogate materials and the IAEA found documents showing that Iran was using tungsten as a simulated nuclear explosive. Through "hydrodynamic" experiments, the tungsten could be heated and compressed just like nuclear fuel to form a molten fluid.

Furthermore, inspectors used satellite images to identify a large and undeclared cylindrical vessel where up to 70 kilograms of high explosives could be safely detonated and contained in experiments to model compression and detonation.

Has any of this work continued?

The IAEA says that information supplied from two member states in 2008 and 2009 shows that Iran has been using sophisticated computer programs to simulate and model shock-wave interactions with metals, neutron flows and the effects of shock compression. That's just the sort of preparatory data needed to design and build a warhead.

Was there anything in the programme that could only be aimed at nuclear weapon development?

One aim of Project 111 was to develop a prototype firing system that would enable a bomb to explode in the air instead of on impact. Experts the IAEA consulted said that the only likely application for this would be for a nuclear weapon rather

than a chemical weapon or other type.

Most of the other projects could, at a stretch, be applied to conventional weaponry. But the combination of research on so many devices essential for nuclear weapons leads the agency to express "concerns about possible military dimensions to Iran's nuclear programme".

So where does this leave Iran's stand-off with other countries?

Despite the intense activity a decade ago, the message is that if Iran does have military nuclear ambitions, they've been considerably blunted since 2003, and are still at a very rudimentary stage. "There's no indication in the IAEA report that Iran mastered the various processes involved in weapons design and manufacture," says Fitzpatrick of the IISS. That opens the door for increased international pressure and [negotiation](#) to resolve the stand-off. "The White House has appropriately underscored that the US continues to focus on using diplomatic channels to pressure Iran to abandon its sensitive nuclear activities," according to a statement from the US Arms Control Association.

9 November 2011 Last updated at 19:45 GMT

Russia rules out new Iran sanctions over nuclear report



Iran insists its nuclear sites are engaged in non-military projects

Russia has ruled out supporting fresh sanctions against Iran, despite a UN report that says Tehran may be trying to develop nuclear weapons.

Britain, France and the US all said they would pursue new sanctions against Iran in the wake of the IAEA report.

Israeli PM Benjamin Netanyahu said the report showed the need for the world to stop Iran developing nuclear weapons.

The US and its allies suspect Iran of trying to develop a nuclear bomb, which Tehran denies.

The Iranian government insists that its nuclear programme is for peaceful means.

Russian Deputy Foreign Minister Gennady Gatilov told Interfax news agency that extra sanctions "will be seen in the international community as an instrument for regime change in Iran".

"That approach is unacceptable to us, and the Russian side does not intend to consider such proposals."

The Russian foreign ministry later issued another statement saying that the report "does not contain fundamentally new information".

Analysis

Jonathan Marcus BBC defence & diplomatic correspondent

The focus moves to the diplomatic arena - the US and its allies eager to use the IAEA's report to prompt a new and tougher round of sanctions against Tehran.

French Foreign Minister Alain Juppe's position is typical - the issue should go to the UN Security Council, he says, adding that Paris is ready to adopt "unprecedented" sanctions against Iran.

But the Russians take an opposite view. Furious at the detailed material published by the IAEA which they believe will simply back Iran into a corner, the Russian deputy foreign minister made it clear that Moscow will not back additional economic sanctions.

China is fast becoming one of Iran's main trading partners. Its support will be crucial if pressure is to be ramped up on Iran

but don't hold your breath. Beijing, with its huge thirst for energy, simply does not see this issue in the same way as Washington.

However, Mr Netanyahu accused Iran of endangering world peace.

"The significance of the report is that the international community must bring about the cessation of Iran's pursuit of nuclear weapons which endanger the peace of the world and of the Middle East," he said in a statement.

"The IAEA [International Atomic Energy Agency] report corroborates the position of the international community, and of Israel that Iran is developing nuclear weapons," Mr Netanyahu added.

The IAEA said it had information indicating Iran had carried out tests "relevant to the development of a nuclear explosive device".

The report - [published on the Institute for Science and International Security website](#) - says the research includes computer models that could only be used to develop a nuclear bomb trigger.

It documents alleged Iranian work on the kind of implosion device that would be needed to detonate a nuclear weapon.

On Wednesday, a defiant Iranian President Mahmoud Ahmadinejad said his country would not budge "one iota" from its nuclear programme.

He said the report was based on "empty claims" provided by the US.

"Why do you damage the [UN] agency's dignity because of America's invalid claims?" he said in a televised speech.

Addressing the US he added: "We will not build two bombs in the face of your 20,000. We will develop something that you cannot respond to, which is ethics, humanity, solidarity and justice.

"You should know that no enemy of the Iranian people has ever tasted victory."

'Additional pressure'

Britain and France voiced their "utmost concern regarding the military dimension to Iran's nuclear programme in the light of ... [the] IAEA report".

In a joint statement, the two governments "made clear their determination to seek new powerful sanctions if Iran refuses to cooperate".

"Our goal remains to ensure that Iran fully adheres to its international obligations," it added.

Earlier, French Foreign Minister Alain Juppe said the seriousness of the report warranted a meeting of the UN Security Council.

"If Iran refuses to conform to the demands of the international community and refuses any serious co-operation, we stand ready to adopt, with other willing countries, sanctions on an unprecedented scale," he told French radio.

A senior US official said Washington would consult with partners on "additional" pressure and sanctions on Tehran.



Iran's President Mahmoud Ahmadinejad: "We don't need an atomic bomb"

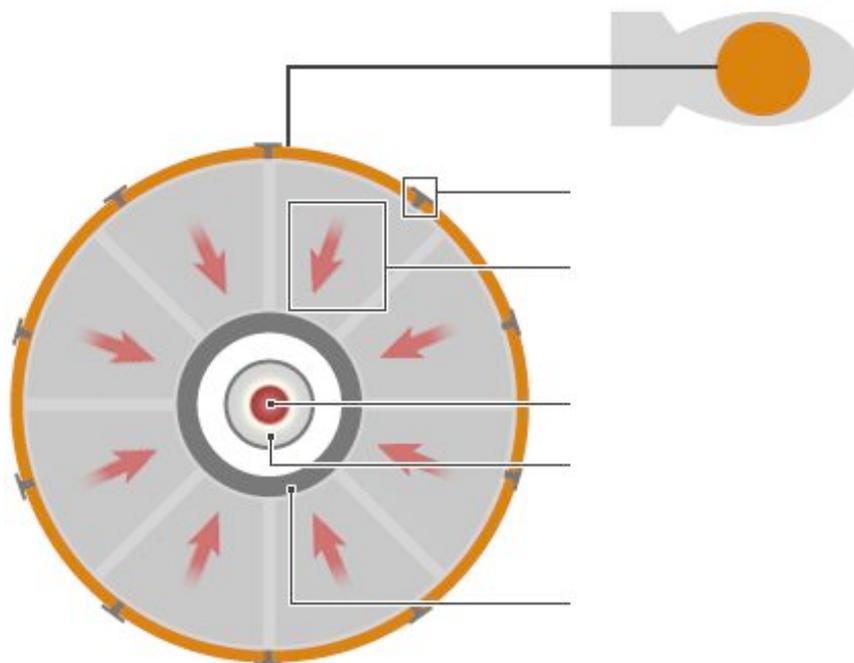
"We don't take anything off the table when we look at sanctions. We believe there is a broad spectrum of action we could take," the official said, quoted by AFP news agency.

The EU said the report "seriously aggravates" existing concerns.

"Overall these findings strongly indicate the existence of a fully-fledged nuclear weapons development programme in Iran," said a spokeswoman for EU foreign policy chief Catherine Ashton.

Baroness Ashton represents six world powers - the UK, China, France, Germany, Russia and the US - in stalled negotiations with Iran over its uranium enrichment programme.

The BBC's Kim Ghattas in Washington says China is also unlikely to support further sanctions against Iran.



- **How an implosion device could trigger a nuclear bomb**
- Cross section of implosion device
- **1. Detonators** triggered
- **2. Explosives** create shock-waves and compress core
- **3. Initiator** kick-starts the fission process
- **4. Compressed fissile core** (of uranium or plutonium) becomes unstable and starts nuclear chain reaction
- **5. Tamper layer** contains neutrons and expansion briefly, to maximise fission

Nuclear agency says Iran worked on weapons

IAEA says in new report it has "serious concerns about possible military dimensions to Iran's nuclear programme".

Last Modified: 09 Nov 2011 01:52

The UN nuclear watchdog has expressed concern about Iran's nuclear activities in a new report detailing what it calls "credible" information that Tehran may have worked on developing nuclear weapons.

In the report, published on Tuesday, the International Atomic Energy Agency (IAEA) said: "The agency has serious concerns regarding possible military dimensions to Iran's nuclear programme.

"After assessing carefully and critically the extensive information available to it, the agency finds the information to be, overall, credible. This information indicates that Iran has carried out activities relevant to the development of a nuclear explosive device."

Al Jazeera's Dorsa Jabbari on Iran's reaction

The agency also said that its information revealed that "prior to the end of 2003, these activities took place under a structured programme, and that some activities may still be ongoing".

The Vienna-based agency said it possessed information on Iran's work "on the development of an indigenous design of a nuclear weapon including the testing of components".

The IAEA, whose board could decide to report Tehran to the UN Security Council next week, called on Iran "to engage substantively with the agency without delay for the purpose of providing clarifications."

Iran, which says its nuclear programme is peaceful and which has been hit by four rounds of UN Security Council sanctions, dismissed the new IAEA report prior to its publication, saying it was based on falsified information.

The report comes amid rising speculation that Israel might launch a pre-emptive military strike in an attempt to knock out Iranian nuclear facilities.

Russian 'serious doubts'

Russia criticised the report, saying it would reduce hopes for dialogue with Tehran and suggesting it was aimed to scuttle the chances for a diplomatic solution.

"We have serious doubts about the justification for steps to reveal contents of the report to a broad public, primarily because it is precisely now that certain chances for the renewal of dialogue between the 'sextet' of international mediators and Tehran have begun to appear," the Russian foreign ministry said in a statement.

Joseph Cirincione says diplomacy is still an option

Russia and China had jointly pressured the IAEA not to even publish the report, diplomats in Vienna said.

Al Jazeera's Patty Culhane, reporting from Washington DC, said: "This is a report the US wanted the IAEA to come out with. We expect the Obama administration to use this report on the international stage to impose stricter sanctions... but to get that, they need China and Russia to get on board."

A senior US administration official told Al Jazeera: "The IAEA report does not assert that Iran has resumed a full-scale nuclear weapons programme, nor does it have a conclusion about how advanced those activities are, but clearly indicates there are activities of concern."

"I think going forward... this report will further underscore that Iran is the only [Non-Proliferation Treaty] signatory that is

unable to convince the IAEA of the peaceful intent of its programme.

"That, in and of itself, further isolates Iran within the international community. I think it's incumbent on Iran to answer the very serious questions raised by this report."

Report: Iran developing nuclear bombs

By the **CNN Wire Staff**

November 8, 2011 -- Updated 2149 GMT (0549 HKT)



Iran's President Mahmoud Ahmadinejad addresses the 66th UN General Assembly at the United Nations headquarters in New York, September 22, 2011.

STORY HIGHLIGHTS

- **NEW:** A U.S. official calls the report "a big deal"
- **NEW:** A nuclear watchdog report expresses serious concern over Iran's nuclear program
- Mahmoud Ahmadinejad dismisses the report as fabrication
- U.S. officials say the White House will use the report to lobby for more sanctions

(CNN) -- The International Atomic Energy Agency issued a critical report Tuesday saying that it has "serious concerns" about Iran's nuclear program and has obtained "credible" information that the Islamic republic may be developing nuclear weapons.

The IAEA report, the most detailed to date on the Iranian program's military scope, found no evidence that Iran has made a strategic decision to actually build a bomb. But its nuclear program is more ambitious and structured, and more progress has been made than previously known.

"The agency has serious concerns regarding possible military dimensions to Iran's nuclear program," the report said. "After assessing carefully and critically the extensive information available to it, the agency finds the information to be, overall, credible. The information indicates that Iran has carried out activities relevant to the development of a nuclear explosive device."

U.S. State Department spokeswoman Victoria Nuland said the report had just arrived and refrained from commenting on details at an afternoon briefing. But a senior U.S. official called the report "a big deal."



Ahmadinejad: look at U.S. nuclear arms

"The report is very comprehensive, credible, quite damning, and alarming," the official said.

[Read the IAEA report here](#)

Iranian President Mahmoud Ahmadinejad slammed the report as a fabrication of facts aimed at satisfying U.S. allegations about Iran's nuclear program.

Ahmadinejad essentially called Yukiya Amano, the director general of the IAEA, a U.S. puppet and said the United Nations agency has no jurisdiction in Iran.

"The Americans have fabricated a stack of papers and he keeps speaking about them," he said on state-run Press TV. "Why don't you do a report on the U.S. nuclear program and its allies? Present a report on the thousands of U.S. military bases where Washington has nuclear arms that threaten global security."

The IAEA had released another report on Iran in September but this one was highly anticipated because of the military aspect.

Since 2002, the IAEA has regularly received new information pertaining to the development of a nuclear payload for a missile, the report said.

It said Iran has made "efforts, some successful, to procure nuclear related and dual use equipment and materials by military related individuals and entities" and has acquired nuclear weapons information from "a clandestine nuclear supply network."

It has also worked on mastering the design of a nuclear weapon and tested components, the report said.

The IAEA said the some of the activities have both civilian and military applications, but others are specific to nuclear weapons.

Iran has repeatedly insisted its nuclear program is for peaceful, civilian energy purposes only.

According to the IAEA report, Iran is believed to have continued weapons research and technology development after 2003, when the intelligence community thought Iran had stopped. Instead of halting, it seems Iran took a temporary hiatus at the time, although the program progressed at a more modest pace since then, the report said.

Previous IAEA reports have cited concerns by the organization that Iran has been seeking to develop nuclear warheads and ballistic missiles to deliver them.

Word of the latest report drew strong comments in Israel, where talks of how to deal with Iran have recently hit fever pitch. Israel considers Iran its arch-nemesis for the Islamic republic's repeated innuendos about the destruction of the Jewish state.

Ahead of the report's release, Israeli Defense Minister Ehud Barak warned that his nation would consider every option in countering Iran's bomb-making capabilities.

"Israel does not want a confrontation, but if it happens, the state of Israel will not be destroyed and there will not be 10,000 dead and not even 500 dead in any possible scenario," Barak said Tuesday on Israel Radio.

Iranian Defense Minister Brig. Gen. Ahmad Vahidi said Iranian armed forces were in "full combat readiness and will give a crushing response to those daring to attack the country," IRNA said.

The United States, Vahidi said, was trying to "promote Iranophobia" in a bid to attain its "sinister goals."

The United States and other Western powers have long suspected that Iran's nuclear program is geared toward weapons development.

The United States is looking to increase the heat on Iran, including a possible strengthening of existing sanctions on Iran's financial and banking sectors and additional political pressure -- all of which could be applied by the United States alone or in coordination with other allies.

The United States also hopes international organizations, such as the United Nations, will take steps to further isolate Iran diplomatically.

Officials said that one of several options being considered is sanctioning the Central Bank of Iran, although the United States is mindful of the impact such a move could have on oil prices during a time of global economic turmoil.

U.S. officials said President Barack Obama's administration will use the report to lobby the international community to slap new economic sanctions against Iran.

Obama said he discussed the upcoming report with French President Nicolas Sarkozy in Cannes, France, during a meeting of the G-20 industrialized nations. The U.S. president said the two leaders "agreed on the need to maintain the unprecedented international pressure on Iran to meet its obligations."

8 November 2011 Last updated at 19:10 GMT

UN nuclear agency IAEA: Iran 'studying nuclear weapons'



Russia helped Iran build its Bushehr nuclear power plant

The UN's nuclear watchdog says it has information indicating Iran has carried out tests "relevant to the development of a nuclear explosive device".

In its latest report on Iran, the IAEA says the research includes computer models that could only be used to develop a nuclear bomb trigger.

Correspondents say this is the International Atomic Energy Agency's toughest report on Iran to date.

Iran says its nuclear programme is solely to generate civilian power.

The BBC's Bethany Bell, in Vienna, has examined the IAEA's latest quarterly report on Iran's nuclear programme.

She says the report gives detailed information - some of it new - suggesting that Iran conducted computer modelling of a kind that would only be relevant to a nuclear weapon.

The report, [published on the Institute for Science and International Security website](#), notes that some of this research, conducted in 2008-09, is of "particular concern", our correspondent says.

Analysis



James Reynolds BBC Iran correspondent

The 25-page IAEA report is written in technical, deliberately undramatic language. But some of its findings are clear.

The report says that Iran has carried out activities "relevant to the development of a nuclear explosive device".

But on first reading, the report does not state that Iran is actually building a nuclear weapon.

The report lists in detail what it believes Iran has been doing in secret. These activities include conducting computer modelling, developing a detonator, and testing high explosives.

The IAEA suggests that some of Iran's activities are only applicable to nuclear weapons research - in other words, there is no innocent explanation for what Iran is doing.

The agency stresses that the evidence it presents in its report is credible and well-sourced.

Iran's president Mahmoud Ahmadinejad has dismissed the IAEA as puppet of the United States. His government has already declared that its findings are baseless and inauthentic.

"The application of such studies to anything other than a nuclear explosive is unclear to the agency," the report says.

It highlights:

- "Efforts, some successful, to procure nuclear related and dual-use equipment and material by military individuals and entities."
- "The acquisition of nuclear weapons development information and documentation from a clandestine nuclear supply network."
- "Efforts to develop undeclared pathways for the production of nuclear material."
- "Work on the development of an indigenous design of a nuclear weapon including the testing of components."

The report stops short, our correspondent adds, of saying explicitly that Iran is developing a nuclear bomb.

It says the information is "credible", and comes from some of the IAEA's 35 member states, from its own research and from Iran itself.

The report urges Iran "to engage substantively with the agency without delay for the purpose of providing clarifications."

Ahead of the report's release, there had been speculation in Israeli media about potential strikes on Iranian nuclear facilities.

Russia said the IAEA report had caused rising tension and more time was needed to determine whether it contained new, reliable evidence of a military element to Iran's nuclear programme.

Experts say Iran is at least one year away, perhaps several, from being able to produce a nuclear bomb. Some believe Iran's leadership wants to be in a position to able to produce such a weapon on short notice.

Iranian Foreign Minister Ali Akbar Salehi said there was "no serious proof" that Iran was going to create an atomic warhead.

"We have repeatedly stated that we are not going to create nuclear weapons," he said. "Our position has always been that we will never use our nuclear programme for purposes other than peaceful ones."

7 November 2011 Last updated at 15:04 GMT

Iran: Heading toward a nuclear show-down?

By Jonathan Marcus Diplomatic and defence correspondent, BBC News



No-one is sure a strike on Iran's facilities will be effective beyond a brief delay

This looks set to be a critical week for diplomatic efforts to rein in Iran's nuclear programme. The UN's nuclear watchdog - the International Atomic Energy Agency (IAEA) - is due to release a report that is expected to give many more details

about the basis for its suspicions that Iran is seeking to develop a nuclear bomb.

As the publication date approaches there's been a flurry of diplomatic activity with noises from Israel - and even from Britain - that a military strike against Iran cannot be ruled out.

As ever with Iran, the big powers are divided. Russia and China are eager that the IAEA pulls its punches, fearing that Iran could be driven into a corner.

Even the Iranians, who continue to insist that they have no desire to have nuclear weapons, have weighed in, claiming that the leaked contents of the IAEA report are "fabrications".

For some years, the IAEA has been warning of its concerns that Iran has been undertaking research related to nuclear weapons. Until now, the details have always been sketchy. There have been fears about "undisclosed nuclear activities involving military related organisations", including explosives research to enable the initiation of a nuclear chain reaction.

This week's report is expected to contain a specific annexe detailing what the agency believes the Iranians may be up to.

Intelligence reports

A flurry of leaked reports suggest that there will be details suggesting Iran's military nuclear research programme continued after 2003; the point when US intelligence agencies believe that such work was halted due to international pressure. Foreign scientists are said to have played a key part in some of Iran's technological breakthroughs.

You will notice that I have been careful to use words like "suggest" and "indicate" because the IAEA has had very limited access to Iran's nuclear programme and the Iranians themselves have been far from helpful in answering the agency's questions.

The main source of the IAEA's material has been the intelligence agencies of several countries. The IAEA has not been able to gather the material itself and the pieces of information with which it has been supplied have been obtained and selected by others.

However, there does seem to have been something of a sea-change within the IAEA itself - a feeling that the full information that it does have on Iran's alleged weapons activities should now see the light of day.

Nonetheless, the IAEA is unlikely to be able to make a definitive judgement as to exactly where the Iranians are along the road towards a bomb.

More diplomacy?

Timelines here are crucial. Indeed, if you look back over the history of the diplomatic battles with Iran, timelines seem to be almost infinitely flexible.

The Israelis, who see an Iranian bomb as an existential threat, have frequently shouted the loudest, but there are generally moments of high anxiety - often leading up to crucial IAEA or UN meetings - after which things calm down again.

Western diplomats take the view that Iran could still be up to three years away from having a bomb, though its research effort has been making steady, albeit slow, progress.

The fuss now centres on this IAEA report and what may come after it. One option would be a full-scale referral to the UN Security Council with the possibility of further economic sanctions. Alternatively, Iran could be given some notice period within which to answer the IAEA's concerns, after which it might be harder for Moscow and Beijing to block a referral to New York.

For now, the diplomatic track probably still has some way to run. Amidst Europe's economic problems, the US end-game in Iraq and Afghanistan, an election looming in Washington and so on, there seems little real enthusiasm for a military option.

How effective?

There are also doubts about just what a military strike would achieve, even if "successful". It might only delay Iran's quest for a bomb, while at the same time confirming its usefulness.

Some US reports suggest there are fears of unilateral Israeli military action, though this could just be another attempt to ratchet up the pressure on Tehran. In that sense, this is just one more stage in a familiar crisis.

However, in one important sense things have changed. The broader upheavals in the Middle East - "the Arab Spring" - leave both Israel and Iran uncertain and more isolated. Israel has lost an ally in the Mubarak administration in Egypt and Iran could well be on the way to losing its only steadfast friend, the Syrian government of President Bashar al-Assad.

Uncertainty and isolation can influence decision-making in strange ways. This is not the final chapter in the saga of Iran's

nuclear programme, but then, no book lasts forever.

7 November 2011 Last updated at 09:48 GMT

Russia: Israeli threat of strikes on Iran 'a mistake'



Iran insists its nuclear programme is solely to generate power for civilian use

Military action against Iran would be a "very serious mistake fraught with unpredictable consequences", Russia's foreign minister has warned.

Sergei Lavrov said diplomacy, not missile strikes, was the only way to solve the Iranian nuclear problem.

His comments come after Israeli President Shimon Peres said an attack on Iran was becoming more likely.

The UN's atomic watchdog is expected to say this week that Iran is secretly developing a nuclear arms capability.

Diplomats say the International Atomic Energy Agency (IAEA) report, due for release on Tuesday or Wednesday, will produce compelling evidence that Iran will find hard to dispute.

Iran has always insisted that its nuclear programme is exclusively to generate power for civilian purposes.

Iranian Foreign Minister Ali Akbar Salehi has said the alleged evidence is a fabrication and part of a multi-pronged US smear campaign against his country.

Time 'running out'

Mr Lavrov said it was "far from the first time" Israel had threatened strikes against Iran, when asked for his view on Mr Peres' recent comments.

"Our position on this issue is well-known: this would be a very serious mistake fraught with unpredictable consequences," he told reporters.

"I estimate that intelligence services of all these countries are looking at the ticking clock, warning leaders that there was not much time left"

Shimon Peres Israeli President

Mr Lavrov said "the only path for removing concerns is to create every possible condition" to resume the talks between Iran and six world powers - including Russia - which broke down in December last year.

Shimon Peres said on Sunday: "The possibility of a military attack against Iran is now closer to being applied than the application of a diplomatic option."

"I don't think that any decision has already been made, but there is an impression that Iran is getting closer to nuclear weapons," he told the Israel Hayom daily.

He made similar comments to Israeli television on Saturday, saying: "I estimate that intelligence services of all these countries are looking at the ticking clock, warning leaders that there was not much time left."

Diplomats, speaking anonymously, have been briefing journalists on the IAEA's next quarterly report on Iran.

The evidence is said to include intelligence that Iran made computer models of a nuclear warhead, as well as satellite images of what the IAEA believes is a large steel container used for high-explosives tests related to nuclear arms.

The IAEA has reported for some years that there are unresolved questions about its programme and has sought clarification of Iran's secretive nuclear activities.

Of this week's report, one Western diplomat told Reuters news agency: "There are bits of it which clearly can only be for

clandestine nuclear purposes. It is a compelling case."

Hardline Iranian cleric Ayatollah Ahmad Khatami warned the IAEA on Monday not to become "an instrument without will in the hands of the United States".

5 November 2011 Last updated at 16:59 GMT

UN report 'to expose Iran nuclear weapons programme'



Iran insists its nuclear programme is solely to generate power for civilian use

The UN's atomic watchdog is planning to reveal evidence that Iran has been working secretly to develop a nuclear weapons capability, diplomats say.

The evidence is said to include intelligence that Iran made computer models of a nuclear warhead.

Iranian officials say the International Atomic Energy Agency report, due next week, is a fabrication.

Israeli officials have said a military option to prevent Iran from gaining nuclear weapons is drawing nearer.

Diplomats, speaking anonymously, have been briefing journalists on the IAEA's next quarterly report on Iran.

They said the report would also include satellite images of what the IAEA believes is a large steel container used for high-explosives tests related to nuclear arms.

Iran says that its nuclear programme is exclusively to generate power for civilian purposes.

"There are bits of [Iran's nuclear programme] which clearly can only be for clandestine nuclear purposes. It is a compelling case"

Diplomatic source

But the IAEA has reported for some years that there are unresolved questions about its programme and has sought clarification of Iran's secretive nuclear activities.

Of next week's report, one Western diplomat told Reuters news agency: "There are bits of it which clearly can only be for clandestine nuclear purposes. It is a compelling case."

Iranian Foreign Minister Ali Akbar Salehi said the alleged evidence was a fabrication and part of a multi-pronged US smear campaign against his country.

'Ticking clock'

Israeli President Shimon Peres, when asked by Israeli television if "something was bringing us closer to a military option rather than a diplomatic one", he replied: "I believe so."

He continued: "I estimate that intelligence services of all these countries are looking at the ticking clock, warning leaders that there was not much time left.

"Iran is nearing atomic weapons and in the time left we must turn to the world's nations and demand [they] fulfil their promise... which is not merely passing sanctions. What needs to be done must be done and there is a long list of options."

Analysts say they believe Iran may still be several years away from having nuclear weapons.

Iran warns US to avoid clash over nuclear programme

Iranian foreign minister says America has 'lost its wisdom and prudence' as tensions mount over Tehran's enrichment efforts

- [Nick Hopkins, Julian Borger and Ian Black](#)
- [guardian.co.uk](#), Thursday 3 November 2011 18.52 GMT



The Iranian foreign minister, Ali Akbar Salehi, said his country was 'prepared for the worst'. Photograph: Esam Omran Al-Fetori/Reuters

[Iran](#) has warned the US not to set the two countries on a collision course over Tehran's nuclear enrichment programme, as diplomatic tensions reflected growing concern that the Middle East might be on the verge of new conflict.

The Iranian foreign minister, Ali Akbar Salehi, spoke amid reports that the Israeli prime minister, Binyamin Netanyahu, has been trying to rally support within his country for an attack.

The Guardian revealed that the UK was advancing contingency plans for joining American forces in a possible air and sea campaign against military bases in Iran.

The revelations led to [Nato](#) insisting on Thursday that it would play no part in any military action, and provoked the rebuke from Salehi, who insisted that any attack by either Israel or the US would provoke immediate retaliation. He also accused Washington of recklessness.

"The US has unfortunately lost its wisdom and prudence in dealing with international issues," he told reporters during a visit to Libya. "Of course we are prepared for the worst, but we hope that they think twice before they put themselves on a collision course with Iran."

In a separate interview with a Turkish newspaper, Salehi claimed Tehran was ready for war with Israel. "We have been hearing threats from Israel for eight years. Our nation is a united nation ... such threats are not new to us," he said. "We are very sure of ourselves. We can defend our country."

The pressure on Iran has been building since allegations surfaced of a plot to assassinate the Saudi ambassador to Washington. The White House insists Tehran was behind the plot, but the Iranian regime has denied that.

The episode added to US concerns about Iran's nuclear enrichment programme and the increasing belligerence of its regime. Intelligence suggests that some of the Iranian centrifuges that can produce weapons-grade uranium are being hidden inside a fortified military base in Qom, about 100 miles south-west of Tehran.

The International Atomic Energy Authority will next week deliver its latest bulletin on Iran's nuclear programme and is expected to provide fresh evidence of covert plans to engineer warheads.

The Israeli defence minister, Ehud Barak, said to be one of those pushing for an early attack on Iran, was in London on Thursday for talks with David Cameron's national security adviser, Sir Peter Ricketts, the foreign secretary, William Hague, and the new defence secretary, Philip Hammond.

Hague said the meeting had given them a chance to discuss "shared concerns such as ... the threat posed by Iran's nuclear programme". Downing Street said "all options are on the table" for dealing with Iran unless it truly abandons any plans to arm itself with [nuclear weapons](#).

Though Britain says its policy on the issue has not changed, [the Guardian disclosed](#) that British military planners were now having to turn contingency plans into practical steps, such as considering when to deploy Royal Navy submarines equipped with Tomahawk cruise missiles to the region, in case Barack Obama bows to pressure to launch missile strikes against

Iranian bases.

Although Iran has insisted it is only developing nuclear energy, Whitehall officials believe the regime will have hidden all it needs to build weapons inside fortified compounds within 12 months – adding a sense of urgency to diplomatic efforts.

The Nato secretary general, Anders Fogh Rasmussen, called for political and diplomatic efforts to resolve the growing crisis. He insisted that Nato would not be drawn into any military action.

"Let me stress that Nato has no intention whatsoever to intervene in Iran, and Nato is not engaged as an alliance in the Iran question," he said.

Villy Søvndal, the new Danish foreign minister, said he could not see any circumstances in which his country would join a military effort against Iran, as it had done in Libya and Afghanistan. "The difference between Libya and Iran is that I could never imagine a UN resolution behind a military attack on Iran. There would be no regional backup. That would be one of the most impossible military missions.

"Of course, you can bomb some buildings and equipment and maybe you could delay for a period of one or two years. But I can no see any situation in which Denmark would participate. It would produce so much instability ... you could also end in a situation where you strengthen the present Iranian regime."

In Israel, the row over whether to launch strikes against Iran continued, with Netanyahu reportedly ordering an investigation into alleged leaks of plans to attack nuclear facilities.

According to the Kuwaiti newspaper al-Jarida, the main suspects are the former heads of the Mossad and the Shin Bet, respectively Israel's foreign and domestic intelligence agencies. Netanyahu is said to believe that the two chiefs, Meir Dagan and Yuval Diskin, wanted to disrupt plans being drawn up by him and Barak to hit Iranian nuclear sites.

Both Dagan and Diskin oppose military action against Iran unless all other options – primarily international diplomatic pressure and perhaps sabotage – have been exhausted.

In January the recently retired Dagan, a hawk when he was running the Mossad, called an attack on Iran "the stupidest idea" he had ever heard. The Kuwaiti newspaper has a track record of running stories based on apparently high-level leaks from Israeli officials.

Even well-informed Israeli observers admit to being confused about what is going on behind the scenes.

"It seems that only Netanyahu and Barak know, and maybe even they haven't decided," said Amos Harel and Avi Issacharoff, both respected writers for the newspaper Haaretz.

"While many people say Netanyahu and Barak are conducting sophisticated psychological warfare and don't intend to launch a military operation, top officials ... are still afraid."

The debate in Israel intensified further on Wednesday when [Israel test-fired](#) a missile capable of carrying a nuclear warhead to Iran.

14 November 2011 Last updated at 14:41 GMT

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Iran says it has 'controlled' Duqu malware attack



Researchers believe the malware contained hidden references to a US television series

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Iran has confirmed some of its computer systems were infected with the Duqu trojan, but said it has found a way to control the malware.

Security organisations had previously identified Iran as one of at least eight countries targeted by the code.

The spyware is believed to have been designed to steal data to help launch further cyber attacks.

The sender has not been identified, but researchers have found a reference to a US television programme in Duqu's code.

The Iranian news agency, IRNA, reported that the country's cyber defence unit was taking steps to combat the infection.

"The software to control the virus has been developed and made available to organisations and corporations," Brigadier General Gholamreza Jalali, head of Iran's civil defence body, is quoted as saying.

"All the organisations and centres that could be susceptible to being contaminated are being controlled."

Mr Jalali said a "final report" into which organisations had been targeted was still being worked on.

Third attack?

Last year the Iranian government accused the West of trying to disrupt its nuclear facilities using the Stuxnet worm computer attack.

Then in April 2011 officials said the country's facilities had been targeted by a second piece of malware dubbed "Stars".

Officials now describe the Duqu attack as the "third virus" to hit Iran.

The computer security specialist Kaspersky Lab said it believed that "Stars" was a keylogging program that may have been part of the same attack that installed Duqu.

Keylogging programs are able to collect information about a computer system, take screenshots, search for files and capture passwords.

Thrillers

The firm also [provided more detail](#) about how Duqu worked based on its analysis of other targets.

It said another unidentified company received an email from an individual identifying himself as Mr B Jason who requested a joint business venture.

The firm believed this was a reference to the Jason Bourne books and spy movies.

The recipient was asked to open a Microsoft Word attachment that referenced the targeted company's name in its title, and thus did not appear to be spam.

It said that for every victim a separate set of attack files was created using a different control server. The firm said this happened at least 12 times.

When the addressee opened the file the malware became active through a Truetype font exploit, but did nothing until it detected that there had been no keyboard or mouse activity for ten minutes.

Kaspersky Lab said the font was called Dexter Regular and its creators were identified as Showtime Inc.

"This is another prank pulled by the Duqu authors, since Showtime Inc is the cable broadcasting company behind the TV

series Dexter, about a CSI doctor who happens also to be a serial killer," the report said.

The firm said the exploit then loaded a driver onto the system. Analysis of the driver suggested it was compiled as long ago as August 2007.

"If this information is correct, then the authors of Duqu must have been working on this project for over four years," the report said.

The firm said the driver then began a process that led to the Duqu trojan being installed allowing the attackers to introduce new modules, infect other networked computers, and collect information.

The company said efforts to identify the attackers have been complicated by the fact that the suspects appear to have deactivated several of the control servers thought to have been involved in the attacks.