

Towards a Robust and Resilient Mechanism for the Distribution of Information During an Asteroid Mitigation Event

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Oil painting by Dona Jalufka

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Communicating well mitigates *two* disasters



1. Object detection → global economic crisis, political chaos
2. Object impact → natural disasters

Effective communications:

- quick
- sensitive
- authentic
- trustworthy
- broadly accepted across cultures



Lessons learned from the pandemic



- Natural scientific uncertainty led to expert speculation, conflicting messages, decisions based on thin evidence
- Misinformation and conspiracy theories
- Distrust of experts and mainstream media
- Poor, unsustained public compliance
- National interests vs. international cooperation



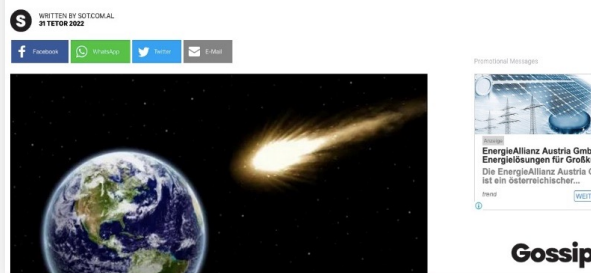
Nagel, Lea.K., Albrecht, R., and Koeberl, C., 2022, Planetary defense: The communication challenge—lessons from the COVID-19 pandemic, [https://doi.org/10.1130/2022.2557\(24\)](https://doi.org/10.1130/2022.2557(24))

Establishing trust is harder than ever



- Fragmentation of media and scientific authorities; top-down communications no longer works
- Science specialists in media are dwindling in number and influence
- Television dominates news, lacks science training
- Social media and infotainment growing in reach
- Many avoid news, even in rich nations

It is moving 25 times faster than the bullet, NASA warns of the danger that will approach the Earth tomorrow



NASA warns of giant 1,600-foot asteroid heading towards earth by Sunday. Details here

1 min read · Updated: 13 May 2022, 02:15 PM IST

Livemint



Asteroid 2008 RW: Größer als der Big Ben! 160-Meter-Brocken rast auf die Erde zu

Regelmäßig rasen gigantische Asteroiden auf unseren Planeten zu. Dabei sind die meisten dieser Begegnungen ungefährlich. Am 12.09.2022 nimmt der 160-Meter-Brocken Asteroid 2008 RW Kurs auf die Erde und könnte massive Schäden anrichten. Das sagt die Nasa.

★★★★☆



Sí, la NASA ha identificado un asteroide "potenci peligroso" para la Tierra. No significa lo que pare

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News of an impending impact will spread in a flash



Who you trust depends on where you live and work



Trusted authorities

	IAWN <ul style="list-style-type: none"> ▪ Initial warning ▪ Expert confirmations 	<ul style="list-style-type: none"> ▪ Astronomers, astrophysicists
	United Nations <ul style="list-style-type: none"> ▪ OOSA/COPUOS ▪ General Assembly ▪ Security Council 	<ul style="list-style-type: none"> ▪ Senior science advisors
	Heads of state <ul style="list-style-type: none"> ▪ National expert councils, agencies ▪ Elected officials ▪ Military, civil protection agencies 	<ul style="list-style-type: none"> ▪ Space agency, military leaders ▪ National academy expert committees
	Media <ul style="list-style-type: none"> ▪ Mainstream news media ▪ Informal and entertainment media ▪ Social media 	<ul style="list-style-type: none"> ▪ Leading academic researchers ▪ Local and international celebrities ▪ Influencers, meme generators
	NGOs Intl orgs Business <ul style="list-style-type: none"> ▪ Intl. and disaster relief orgs ▪ Religious institutions ▪ Investors and industry heads 	<ul style="list-style-type: none"> ▪ Diplomats, org. leaders ▪ Religious leaders ▪ Top analysts, central bank heads

Who speaks for science in a planetary emergency?

To gain the world's trust, be:

- **Established:** already trusted by experts
- **Introduced:** in the first warning as the de facto international authority
- **Multilingual:** in all major world languages
- **Vocal and clear:** regular, unambiguous updates in plain language with the latest details
- **Media savvy:** with even the newest media to reach even news avoiders
- **Independent:** no ulterior motives or national allegiances

Who can be the trusted communicator?



- **No conflicts:** NASA, ESA, Roscosmos, and others have national allegiances
- **No infighting:** U.N. member-state disagreements could hobble IAWN, SMPAG, OOSA, COPUOS
- **No cultural bias:** IAWN not equipped to talk to the whole world



The International Astronomical Union could do the job

- Trusted by astronomers for 100+ years as their global professional society
- Well-connected with U.N., national space agencies and research bodies
- Office for Astronomy Outreach in Beijing already has global, multilingual media operation

A new Point of Contact in IAU's Office for Astronomy Outreach

We propose establishing a new Point of Contact at IAU that:

- Recruits experts to respond within 24 hours to any credible threat
- Maintains lists of government, media, science, and U.N. contacts to notify and holds introductory briefings with all
- Enhances its social media tools and expertise to handle emergency communications
- Collaborates with IAWN; U.N. space bodies; national governments, space and defense agencies, and international federations
- Updates the community annually at IAWN meetings



