

# India's Research Integrity Challenge:

How Managed Peer Review Closes  
the Research Integrity Gap



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# Executive Summary



India is the world's **third-largest** producer of research output. Government investment in research is at its highest level ever, with the Anusandhan National Research Foundation (ANRF) directing **₹50,000 crore** towards a transformed research ecosystem. The One Nation One Subscription (ONOS) scheme has provided **18 million** researchers with access to **13,000** international journals.



**The access problem is being fixed. The quality problem is getting worse.**



In 2023, there were over **14,000** retraction notices worldwide, most linked to flawed peer review processes. From 2023 to 2025, over **6,400** retractions resulted due to fake peer reviews. Paper mills, which create and sell fraudulent research, produced nearly **7,900** retracted publications recently. AI-generated content caused an additional **2,100** retractions. India is **not immune** to any of this.



The ANRF has identified the need to establish a **strong peer review system** as a priority. The NIRF 2025 has set **penalties** for institutions whose researchers produce retracted publications in ranking calculations.



This paper argues that **managed peer review** – professional, structured oversight – is the quality infrastructure India's research ecosystem needs to fulfil its ambitions. It proposes a framework for how journals, institutions and policymakers can approach this and explains how Amnet's managed peer review service supports the **ANRF vision**.



# India's Research Moment - and Its Quality Obligation.



3

India's global rank by research output volume



161,000+

Research papers produced by India in a single year



1,000+

Over 1,000 papers India-affiliated publications retracted primarily because of fake peer review.



India's rise as a research nation is a key story of this decade. Government policies, from NEP 2020 to the establishment of the ANRF by an Act of Parliament in 2023, have made scientific research **a national priority like never before.**



This ambition is justified. A knowledge economy relies on a strong research ecosystem. India's demographic advantage, engineering talent and diverse disciplines give it **true competitive strengths** in the global research scene.



But increased volume comes with responsibility. Small and niche research outputs can experience quality failures, but when a country produces hundreds of thousands of papers annually – with submission volumes expected to rise further under ONOS – these **quality failures become systemic risks.** They threaten the credibility of Indian research on the global stage, the reputation of individual institutions and ultimately the return on the substantial public investment represented by the ANRF.



The goal is not simply to produce more research. The goal is to produce research that the world trusts, cites, and builds upon. **That distinction begins at peer review.**



India's Viksit Bharat 2047 vision aims to position the country as a developed nation within a generation. For this vision to succeed, its research output must gain international recognition and spur real-world innovation. That recognition isn't automatic; it is earned through the credibility of the process that examines and validates research before publication. This process is peer review, and it is facing **unprecedented pressure right now.**

# The Integrity Crisis: What the Data Shows.

The global peer review system is witnessing a structural breakdown. The evidence is no longer anecdotal.



## 14,000+

Retraction notices issued worldwide in 2023



## 6,400+

Retractions (2023-2025) due to fake or compromised peer reviews



## 5,000+

Retractions by mid-2025



### The retraction surge

In 2023, more than **14,000** retraction notices were issued worldwide. This number indicates not just isolated cases of misconduct but systemic issues in managing the peer review process. Over **6,400** retractions from 2023 to 2025 were due to fake or compromised peer reviews, where retraction notices mentioned 'systematic manipulation of the publication and peer review process'. In 2024 alone, over **9,000** more retractions followed. By mid-2025, the yearly total already exceeded **5,000**.



### Paper mills: a structured threat

Paper mills are not just rogue entities; they are organized businesses that produce fraudulent research on a large scale and offer authorship slots for sale. The Retraction Watch database links nearly **7,900** retractions to paper mill operations. Research published in 2025 identified **142** journals that collectively retracted over **2,000** articles from paper mills, with **35** journals each experiencing **10** or more such retractions. These are not obscure publications; many are indexed journals with impact factors in mainstream fields. Published calls to action in Indian medical and scientific journals have identified the spread of paper mills as a pressing national issue, not a minor one.



### AI-generated submissions: a rising and urgent

From 2023 to 2025, over **2,100** retractions were associated with AI-generated content. Retraction notices noted 'tortured phrases', unusual language and text clearly created by large language models. This isn't just a future concern; it is happening now, and peer review systems that were established before AI tools existed struggle to manage it.



### India's specific exposure

Retraction Watch, an independent integrity monitoring project, has tracked retraction trends within Indian institutions, including cases involving IIT faculty, and has highlighted India's vulnerability to AI-generated fake results and image manipulation. A 2025 Nature article specifically analysed these issues in India. The NIRF 2025 framework, which now penalises retracted publications in institutional rankings, shows that this is a **governance issue at the national level** – not just an individual institutional problem.



### The common thread

In the cases of paper mills, fake peer reviews and AI-generated submissions, the common vulnerability is clear: a peer review process that is overwhelmed, lacks resources and operates without the necessary screening, verification and auditing measures to back its decisions. The editors of these journals are not negligent; they are **structurally underequipped**, with increasing submission volumes and stagnant editorial capacity.

# The Policy Framework: ANRF, NIRF and ONOS

Three policy changes together create both urgency and opportunity for investment in peer review infrastructure in India right now.

| Policy Instrument                                                                                                                                 | What It Does                                                                                                                                                                                     | Peer Review Implication                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>ANRF, Anusandhan National Research Foundation Act, 2023</b> | Apex body for all scientific research direction in India. Subsumed SERB. ₹50,000 Cr over 5 years. Explicitly mandated to develop a robust internal peer review system for grant quality control. |  ANRF's own governance requires a peer review system it does not yet have. This is both an institutional gap and a partnership opportunity.                                           |
|  <b>NIRF, National Institutional Ranking Framework, 2025</b>   | Updated framework formally penalises retracted publications in institutional rankings. Research quality is now a ranking metric with direct institutional consequences.                          |  Every IIT, central university and NAAC-accredited institution now has a direct financial and reputational incentive to ensure their journals run rigorous, audit-ready peer review. |
|  <b>ONOS, One Nation One Subscription (live Jan 2025)</b>      | Gives 18 million Indian researchers at 6,300+ institutions access to 13,000 international journals. The single-largest access expansion in Indian academic history.                              |  Access creates confidence to submit. Submission volumes from India to ONOS journals will rise materially – increasing the peer review load on publishers already at capacity.       |

## THE POLICY GAP THIS PAPER ADDRESSES

The government of India has made substantial investments in research access (**ONOS**), research funding (**ANRF**) and research accountability (**NIRF**). However, the policy framework does not yet clearly address the quality infrastructure needed between funding and publication – the peer review process itself. **ANRF's** mandate to build this infrastructure recognises the gap. This paper suggests that managed peer review, provided by expert partners with extensive publishing experience, can effectively close that gap at scale.

# Why Peer Review Is the Critical Failure Point



Amongst all stages in the research life cycle – from grant application to publication, peer review is the most labour-intensive, most reliant on voluntary goodwill and least supported. It's also the stage where any integrity failure that may later lead to a retraction could, in theory, have been detected.

## The structural problem facing Indian journals



Most Indian society journals, institutional journals and university press publications manage peer review with one or two full-time editorial staff, often aided by a volunteer editor-in-chief who has a full academic workload. These teams handle submission volumes that have increased year after year for a decade. They do this with submission management platforms that address logistics but lack intelligence. These tools can track a manuscript's progress but cannot screen for paper mill signatures, verify reviewer conflicts of interest against co-authorship networks or create an audit trail that would hold up in a post-publication integrity investigation.



## The three compounding pressures



**Reviewer fatigue:** Globally, acceptance rates for reviewer invitations are **declining**. Journals that once needed to invite two reviewers to secure one now have to invite **four or five**. The time spent managing reviewers (inviting, chasing and replacing) takes away from the editorial capacity that should focus on decision-making.



**Conflict-of-interest gaps:** Most journals check for declared conflicts – such as same institution or recent co-authorship – but few check for **citation rings**, where coordinated networks of researchers systematically cite each other to inflate metrics. In India's close academic networks, where co-authorship is common and institutional relationships are tight, **this gap is particularly severe**.



**The audit trail deficit:** When a published paper is questioned – by a post-publication reviewer, a co-author dispute or a retraction investigation – the journal must be able to re-create the entire review history. Many Indian journals **struggle to do this reliably**. This issue is not due to negligence. It reflects a structural gap in how peer review has traditionally been documented, and it has become **a serious liability**.

# What Managed Peer Review Is – and Is Not

Before suggesting managed peer review as part of India's research integrity framework, it's important to clarify what the term means, as it is sometimes misunderstood in ways that create unnecessary resistance.



## WHAT MANAGED PEER REVIEW IS NOT

Managed peer review does not mean handing off editorial judgement. The decision – accept, reject, revise – remains with the editor. The intellectual authority of the editor-in-chief and the editorial board is intact. Any service that claims to replace editorial judgement is not managed peer review; it is editorial abdication, and no credible journal should consider it.



## WHAT MANAGED PEER REVIEW IS

Managed peer review is the professional, organized management of the peer review process as an extension of the editorial team. It includes manuscript screening before assigning reviewers; identifying reviewers and checking for conflicts of interest; managing reviewer invitations and communications; tracking decisions; and producing a complete, retrievable audit trail. The editor makes the decision. Managed peer review provides the infrastructure to support that decision with confidence, speed and accountability.



The closest analogy is a **well-run court system**. A judge's decisions are solely their own, but they rely on court administration, case management systems, documented procedures and qualified clerks to ensure the process leading to those decisions is **thorough, timely and accountable**. No one argues that court administration weakens judicial independence. The editorial infrastructure should be seen in the same light.



# A Framework for India: Four Layers of Intervention

Effective managed peer review in India requires four layers of intervention, each addressing a distinct failure point. These layers do not follow a sequence; they work together as an integrated system.



| Layer                                                                                                                               | What It Addresses                                                                                                                                                                             | India Context                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>01 – Intelligent Screening</b>                | Paper mills, AI-generated text, fake citations, image manipulation, scope mismatch and authorship irregularities must be flagged before any reviewer is assigned.                             |  With rising submission volumes under ONOS, the cost of reviewers spending time on manuscripts that should be desk-rejected is high. Screening                                     |
|  <b>02 – Reviewer Intelligence</b>               | This involves identifying reviewers, verifying conflicts of interest (including citation rings and co-authorship networks), managing invitations and tracking reviewer performance over time. |  The dense co-authorship networks and close institutional ties in Indian academia make conflict-of-interest verification critical. Standard checks for declared conflicts are not |
|  <b>03 – Structured Communication</b>            | Systematic, accountable communication with reviewers, including invitations, reminders, feedback collection and decision notifications, reduces reviewer fatigue and improves response rates. |  Editorial teams relying on email and goodwill cannot maintain quality with the current submission load. Structured communication increases capacity and sends a quality          |
|  <b>04 – Audit Trail and Integrity Reporting</b> | A complete, retrievable record of every peer review decision, including reviewer identities, declared conflicts, timeline and editorial reasoning must survive post-publication examination.  |  Under NIRF 2025, retracted publications affect rankings. Journals that can show a clean, documented review process are in a much better position if a paper is ever contested.   |

# How Amnet **Delivers this Framework** in practice

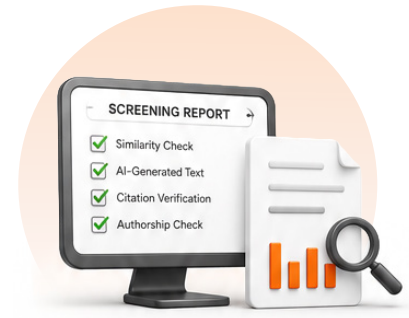
## Layer

# 01



### Intelligent Screening

Amnet's editorial teams conduct structured pre-review screening using AI tools for similarity detection, AI-generated text flagging, citation verification and authorship anomaly checks. Every manuscript receives a screening report before a reviewer is assigned, giving the editor a clear basis for desk decisions.



## Layer

# 02



### Reviewer Intelligence

Using a curated reviewer database built over 25 years of STM publishing experience, Amnet matches reviewers by discipline, recency and verified conflict-of-interest status, while also checking co-authorship networks and citation relationships.



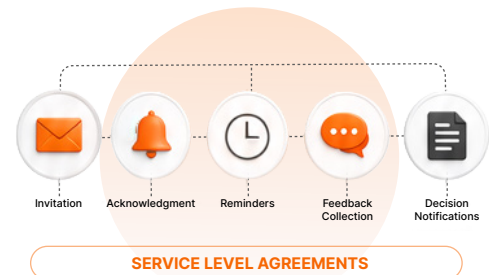
## Layer

# 03



### Structured Communication

Amnet manages the complete reviewer communication cycle: invitation, acknowledgment, reminders, feedback collection and decision notifications – with defined service level agreements at each stage. Editors receive status updates instead of managing the process themselves.



## Layer

# 04



### Audit Trail

Every managed peer review engagement at Amnet results in a structured integrity report for each published paper, detailing reviewer identities (anonymised as needed), conflict-of-interest declarations, timelines and decision rationales. This audit trail is securely held and made available to the editor upon request.



# Recommendations

The following recommendations are aimed at three distinct audiences, each of whom plays a role in improving the peer review quality infrastructure that aligns with India's research ambitions.

## For journal editors and editorial boards

R1

### Run a peer review diagnostic



Before investing in any new tool or service, review your current process using the four-layer framework above. Your desk-rejection rate, reviewer acceptance trends and audit trail preparedness will indicate where to focus.

R2

### Separate screening from peer review



Implement a formal screening stage before manuscripts go to reviewers. Even a simple AI-assisted screen for similarity, authorship anomalies and scope fits significantly eases reviewer burden.

R3

### Extend your conflict-of-interest checks



Declared conflicts are just a starting point. Conduct co-authorship network checks for at least the past five years, and consider citation relationship checks for high-volume fields.

R4

### Build your audit infrastructure now



Begin documenting every peer review decision with structured records. The cost of doing this proactively is low. The cost of reconstructing it during an investigation is very high.



## For institutional research administrators

R6

### Treat peer review as infrastructure, not overhead



Research quality does not start at publication; it's determined at the review stage. Institutions that invest in their journals' peer review capabilities protect their NIRF rankings and global reputation

R7

### Consider managed peer review for institutional journals



For journals where editorial capacity is limited compared to submission volume, partnering with a managed peer review service offers a quicker and more cost-effective path to quality improvement than hiring more editorial staff.



## For policymakers and ANRF stakeholders

R6

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# About Amnet ContentSource



Most Indian society journals, institutional journals and university press publications manage peer review with one or two full-time editorial staff, often aided by a volunteer editor-in-chief who has a full academic workload. These teams handle submission volumes that have increased year after year for a decade. They do this with submission management platforms that address logistics but lack intelligence. These tools can track a manuscript's progress but cannot screen for paper mill signatures, verify reviewer conflicts of interest against co-authorship networks or create an audit trail that would hold up in a post-publication integrity investigation.

Amnet partners with a wide range of academic and STM publishers – from the world's largest university presses and commercial STM publishers, such as Oxford University Press and Springer Nature, to learned societies and specialist journals across various fields. Amnet has supported the editorial workflows of hundreds of journals, handling tens of thousands of manuscripts annually.

This depth of operational experience is what informs Amnet's managed peer review service. Having worked inside journal workflows across disciplines and geographies for more than two decades, Amnet understands where the process is most vulnerable – not in theory but in practice. The MPR service is built around the four-layer framework described in this paper: intelligent screening, reviewer intelligence, structured communication and audit trail generation. Every engagement begins with a diagnostic of the journal's current process; the service is then structured around the specific gaps that diagnostic identifies.

Amnet is headquartered in Chennai, India, and is committed to the development of India's research publishing ecosystem. The challenges described in this paper are the ones we see at close range, and the recommendations we make are the ones we are actively equipped to support.

## GET IN TOUCH

To discuss how Amnet's managed peer review service can support your journal or institution, or to arrange a no-obligation diagnostic conversation with our editorial team: