



SOCIEDADE BRASILEIRA
DE BIOSSEGURANÇA
E BIOPROTEÇÃO

SB3 TECHNICAL NOTE 02/2025

Biosafety, Biosecurity, and Considerations on the Use of the Term 'Biosseguridade'

Proposal for Terminological Harmonization in the Portuguese-speaking Context

1. Contextualization and Motivating Fact

The dissemination of the term 'biosseguridade' in technical publications, sectoral regulations, and training materials in Portuguese has generated significant conceptual confusion in the field of biosafety and biosecurity. This term began to be used, especially in Brazil, as an incorrect translation—sometimes for the English term 'biosecurity', sometimes for 'biosafety'—without technical or normative support in the main international references.

In some sectors, such as national poultry and swine production, there is an attempt to treat 'biossegurança' and 'biosseguridade' as distinct concepts, both corresponding to 'biosafety'. In these cases, 'biosseguridade' is often considered exclusive to the animal sector — an artificial distinction without technical basis. This situation is particularly concerning for the fields of biosafety and biosecurity and the principles of the 'One Health' approach, which require conceptual clarity and integration between the human, animal, and environmental health sectors.

This technical note does not intend to invalidate existing practices or documents but to contribute with a proposal for technical alignment that strengthens communication and governance of biological risks in Portuguese-speaking countries.

2. Technical Comparison: Use of Terms in Official Documents

The term 'biosseguridade' in Portuguese seems to be a literal derivation of the Spanish 'bioseguridad'. This translation is surprising, considering that in Spanish 'bioseguridad' corresponds to 'biosafety'. Meanwhile, 'biosecurity' was initially translated in that language as 'biocustodia' and more recently standardized as 'bioprotección'.

Nevertheless, many still use in Portuguese the term 'biosseguridade' alongside 'biossegurança', which reinforces conceptual confusion. Although the term 'biosseguridade' appears in some documents, it lacks technical or normative recognition and has no theoretical foundation. Its use is therefore conceptually inappropriate and confusing, reinforcing a mistaken interpretation in Brazil and other Portuguese-speaking countries, particularly in the animal health sector.



Some claim that the term 'biosseguridade' would be justified as a synonym for 'biosafety' in avian and swine health, while 'biossegurança' would be reserved for human health — an artificial and technically unjustifiable distinction.

Comparative analysis of official and technical documents shows a clear inadequacy in using 'biosseguridade' also as a translation for 'biosecurity'. The ISO 35001:2019 standard, in its official European Portuguese version, translates 'biosafety' as 'biossegurança' and 'biosecurity' as 'bioproteção'. Likewise, the WOA (World Organisation for Animal Health) Terrestrial Animal Health Code, which directly addresses sanitary safety in agricultural contexts, uses only the terms 'biossegurança' and 'bioproteção'. The official page of the Brazilian Ministry of Agriculture and Livestock (MAPA) also presents a technical glossary in which 'bioproteção' is used as the equivalent of 'biosecurity'. In this sense, the disparity in the use of 'biosseguridade' in Portuguese-language technical documents reinforces the urgency of terminological review and technical alignment.

3. Evidence of the Correct Use of the Term 'Bioproteção' in Public Institutions and Technical References

Several Brazilian federal institutions, area experts, and leading technical-scientific associations in Brazil and Portugal already clearly and consistently adopt the term 'bioproteção' as the technical equivalent of 'biosecurity', in line with major international guidelines.

Among the bodies that have consolidated this correct use are the Ministry of Health — through the Health Biosafety Commission (CBS), the publication 'Building the National Policy on Biosafety and Biosecurity' (2019), and initiatives from Fiocruz and UNA-SUS — which use 'bioproteção' in conceptual alignment with international standards.

The Portuguese Institute for Quality (IPQ), responsible for the official translation of ISO 35001:2019, also adopts 'bioproteção' as the translation for 'biosecurity', reinforcing this understanding. The Ministry of Agriculture and Livestock (MAPA) and the Ministry of Defense follow the same technical-linguistic line, adopting terminology that respects the principles of normative and conceptual harmonization.

Such evidence strengthens SB3's position on the need to avoid the use of non-standard terms in the field of biosafety and biosecurity — such as 'biosseguridade' — and to promote linguistic standardization in technical documents, regulatory frameworks, and training materials.

4. SB3 Position

Considering the above, the Brazilian Society for Biosafety and Biosecurity (SB3), as a national and international technical-scientific reference entity, considers that the use of the term



'biosseguridade', although present in some contexts, may cause misinformation and hinder policy integration, compromising Brazil's alignment with international practices and standards.

Thus, SB3 reaffirms that the recognized and consolidated terms in Portuguese are: 'biossegurança' for the original term 'biosafety' and 'bioproteção' for 'biosecurity'. The introduction and maintenance of the term 'biosseguridade' should be understood as a technical-linguistic noise that must be overcome based on evidence, regulations, and international consensus.

5. Recommendations and Strategic Guidelines

- Replace the use of the term 'biosseguridade' in technical documents, public policies, training materials, and institutional communications;
- Encourage the harmonization of technical terminology among Portuguese-speaking countries, promoting the correct and uniform use of 'biossegurança' and 'bioproteção';
- Include guidance on appropriate terminology in professional training programs, based on updated international guides and normative references;
- Promote the engagement of technical associations, public and private institutions, and Portuguese-speaking international organizations to achieve conceptual alignment that strengthens global technical and scientific cooperation.

6. Institutional Commitment

SB3 reaffirms its commitment to promoting a biosafety and biosecurity culture based on technical foundations, precise language, and integrative global principles. By issuing this Technical Note, SB3 places itself at the disposal of public and private, national and international institutions to help overcome linguistic and conceptual barriers that still compromise the effectiveness of biosafety and biosecurity policies.

This conceptual alignment, supported by evidence and recognized standards, is essential to strengthen biological risk governance in the contexts of public health, animal production, and environmental protection.

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i. Reference Basis

i.i Consolidation of the Term 'Bioproteção' in Official Documents and National Regulation



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i.ii Normative and Technical References

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