



Are there sufficient education resources to underpin effective implementation of the Tianjin Biosecurity Guidelines for Codes of Conduct for Life Scientists? Results of a Survey

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6 July 2022

Outline

- Background and introduction
- Survey methodology
- Survey result
- Implications

Background

- The Tianjin Biosecurity Guidelines for Codes of Conduct for Scientists

Element 6: Education and Training

- Endorsement and proposal for 9th Review Conference
- Long standing issue of awareness and implementation of code of conduct
- No systematic review on previous work on biological security education and global picture of assessment of resources and efforts so far
- Aim to assist in the consideration of the implementation of the guidelines with a view to discovering what resources and experience has been accumulated
- Seek broad collaboration

Methodology

- A survey project between December 2021 and April 2022
- Literature review to identify potential candidates for survey
- Design questionnaires and small scale of trial
- Surveys with open and close questionnaires
- Analysis of the data
- Summary of results

Table 1: The Closed Questions (Answers from multiple choices when requested)

1. Main People involved
2. Name of the Organisation
3. Name of the Project
4.
 - i. Name of the Funding Organisation (if any)
 - ii. Scale of funding received
 - iii. How easy was it to obtain the funding
 - iv. Source of funding
5. Country in which the project was done
6. Duration of the project
7. Background of the project team
8. Was dual use the main focus of the project?
9. What was the purpose of the project?
10. Was the project conducted for educational purposes?
11. Main targets of the project
12. Ways to teach Biosecurity
13. Method of teaching involved

Table 2: The Open Questions (Views in the responders' own words invited)

1. Object of the project
2. Content (outline) of the material used
3. Method of the project
4. Method of evaluation (if attempted)
5. What was the intended impact of the project?
6. Means used to sustain the use of the knowledge developed in the project
7. Publications on the project
8. Other information (if any)

Results

Quantitative Data

- Fundings towards Research
- Ease of acquiring fundings
- Source of Fundings
- Demographics of the Research
- Background of the Research Team
- Projects focussing on 'Dual-use'
- Research for Educational Purpose
- Targets of the Research
- Opinion on 'Biosecurity' education

Qualitative Data

- Statements on the Purposes of the Projects
- Education Ways and Methods
- Method of Evaluation (if attempted)
- Intended Impact of the Project
- Means to Sustain Use of the Project

Discussion

- Some **missing** projects and large and growing volume of literature
- without awareness-raising and biosecurity education life scientists are **unlikely** to appreciate the importance of building codes of conduct based on the guidelines and using the codes developed to engage the life science community in responsible research that helps to guard their work from misuse
- a range of awareness-raising strategies suitable for undergraduates, postgraduates and life science researchers **but** in which the contents and methods **have rarely** been **adequately** evaluated and replicated in practical projects
- a range of different potential participants and **but again not often adequately** evaluated and replicated in practical projects
- the materials used in such projects would be better available in **multiple languages** and to national, regional and international **collaborative** groups
- the **ideal** situation in which the States Parties to the BTWC decide to implement the Tianjin Guidelines: funding, people involved, methodologies, etc...

Conclusion

- all of the ideal elements required to effectively implement the Tianjin Guidelines are obviously not yet in place
- the efforts of multiple groups over the last two decades has put in place resources and experience that can be fruitfully used in that endeavour over coming years
- the deficiencies identified here can also be remedied relatively quickly if efficiently addressed

Details refer to the project report and paper

Acknowledgements

- The research is supported by an internal fund from London Metropolitan University
- Two research assistants: Michael Mprah and Indrajitrakuraj Ravi
- All survey participants and colleagues around the world



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Thank you !