

PAKISTAN'S NON-PROFLICATION EFFORTS AND STRATEGIC EXPORT CONTROL SYSTEM



Regulating Safety and Security of Radioactive Sources

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Why to Regulate ?

Why We Regulate ?

- Associated radiation hazards if not handled safely and securely





What to Regulate ?



What to Regulate?

- Sealed Sources

- a) permanently sealed in a capsule or
- b) In-dispersible solid (used in NDT, Oil well logging, Industrial Irradiation, etc)



- Unsealed Sources

in the form of radioactive material which is not encapsulated or otherwise contained (extensively used in biological research and medicine)



Radioactive Sources and Facilities in Pakistan

Sealed Radioactive Sources

- | | |
|------------------------|------|
| • Industry | 1110 |
| • Research / Education | 726 |
| • Medical | 414 |
| • Calibration | 1043 |
| • Others | 19 |



Total =3312





How to Regulate ?



Regulatory Processes

- Formulation of Regulations
- Issuing Authorizations/Licences
- Performing Review and Assessment
- Conducting Inspections
- Taking enforcement actions in cases of non-compliances

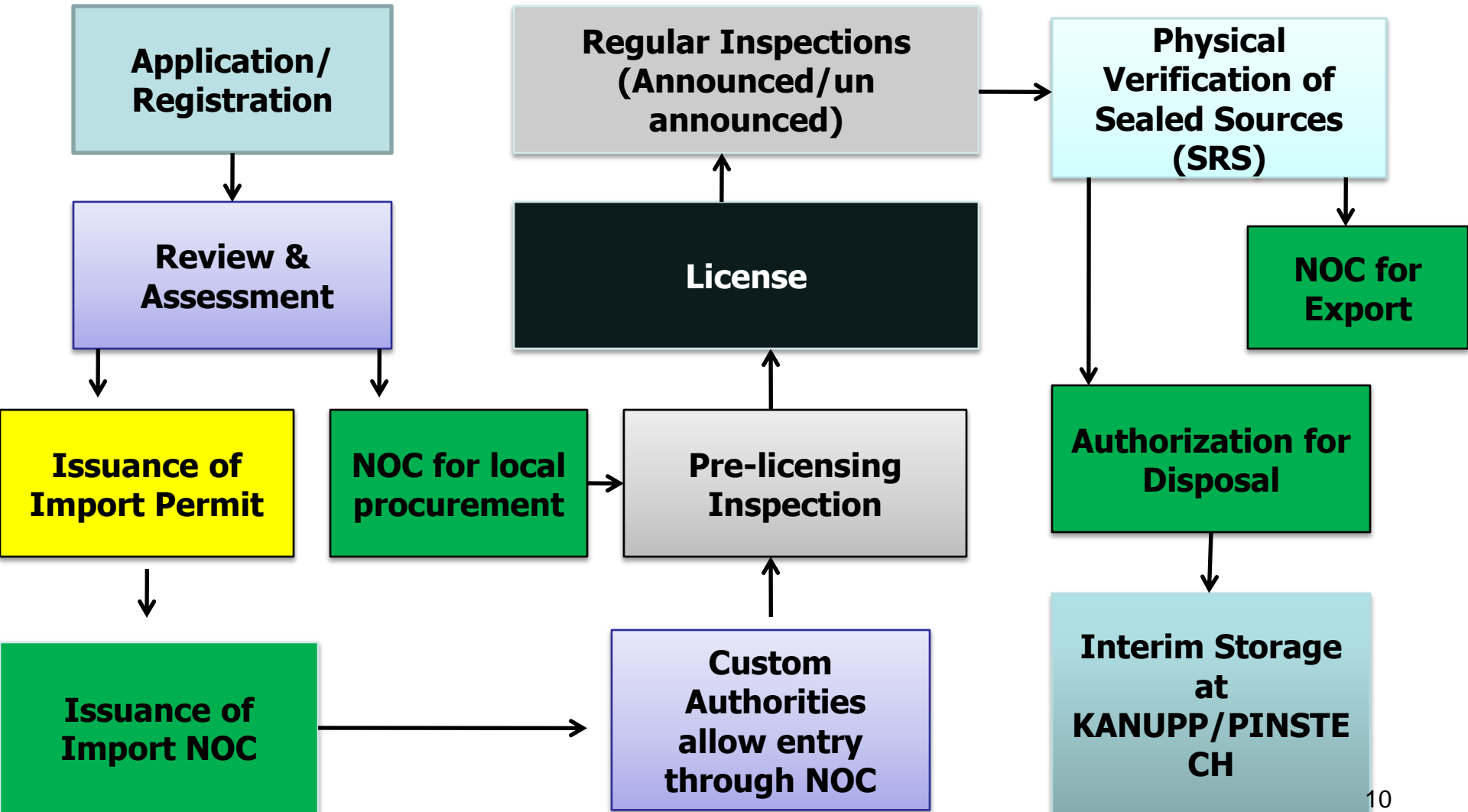


PNRA Regulations

- PAK/904 – Radiation Protection
- PAK/908 – Licensing
- PAK/916 – Safe Transport
- PAK/915 – Radioactive Waste Management
- PAK/926 – Security of Radioactive Sources (Draft)
- PAK/950 – Enforcement

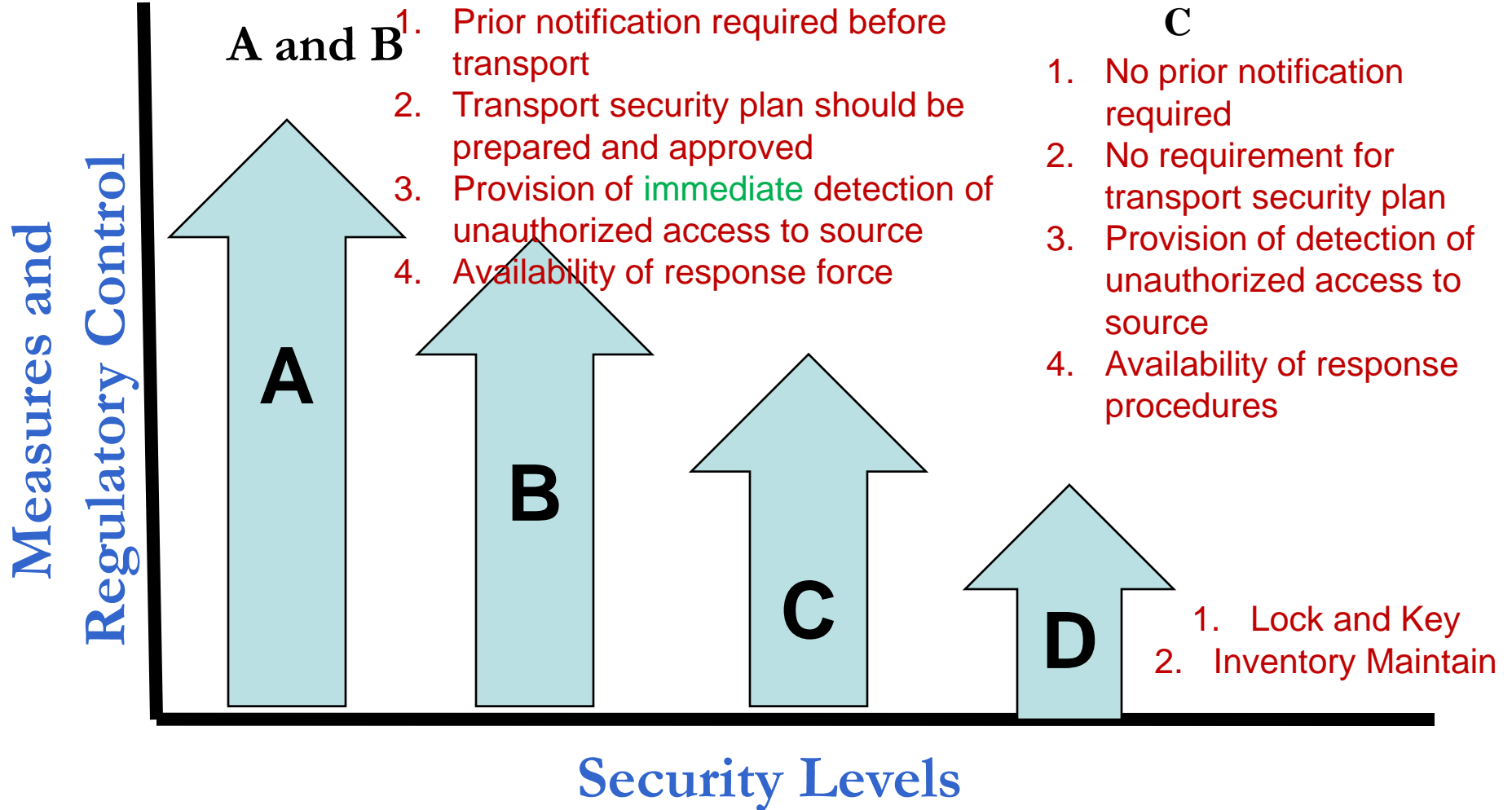


Regulatory Process for safety and security





Graded Approach



Graded approach is applied depending upon the hazards associated with radioactive sources



Conclusion

PNRA regulatory framework is inline with international standards to ensure safety and security of radioactive sources



THANK YOU