Smart solutions for railways-Using IOT

LITERATURE SURVEY:

The defining trend of the last few years has been an exponential increase in the freight trains between Asia- China in particular and Europe. In recent years, the Eurasian railway linkages between Asia and Europe are becoming major established routes for international transport, which offer viable alternative to maritime transport of goods. Although transport by rail is five times more expensive than transport by sea, it is about 1.7 times faster. This makes rail an attractive mode for transporting time-sensitive goods, such as fashion goods, electronics, car parts and perishables including food. The number of Eurasian trains exponentially increased from 308 in 2014 to about 4,400 in 2018, while the volume of traffic has grown from 25,000 TEU to about 345,000 TEU.1 Despite the strong growth, the railway transport share covers only about 1 per cent of the freight traffic between Asia and Europe, while more than 90 per cent of goods are still moved in maritime transport.

1.International railway transport has undergone rapid changes over the last decade with more freight trains moving along the trans-continental corridors- a trend likely to continue.

2. This trend is leading to development of new railway routes, construction of railway infrastructure, expansion of railway services, and new alliances to serve more markets on the international railway corridors along the Trans-Asian Railway Network.

3. Over long run the geography of rail freight flows in ESCAP region and beyond, as well as the railway market in general might undergo substantive changes due to pandemic crisis that is leading to changes in supply chains and possible relocation of production.

“The defining trend in international railway transport during the last few years has been an exponential increase in the freight trains between Asia- China in particular and Europe.”

The Smart Railway Solutions elaborated in this study are meant to expand the knowledge of railway officials of the region on the options available for them to deal with the challenges posed by the pandemic. The COVID -19 pandemic that started as health crisis quickly morphed into socio-economic challenge of humongous proportions- the effects of which would be felt for long time.

As transport has been one of the worst hit sectors by pandemic, the crisis affords an opportunity for transport community to revisit approaches that led to transport development. Generally, transport and economic growth has followed one and another. However, in its pursuit to support economic activities the rapid growth in transport had many negative consequences that have become quite apparent now.

It is widely acknowledged that the business-as-usual approach to transport would have many unsustainable outcomes. Therefore, efforts have been made by countries to increase the sustainability of transport in all its dimensions with focus on its social and environmental aspects. The increasing emissions from transport and its impact on climate change is well documented and needs an urgent response.