Round Table

Rural Industry Revatilization Practices Disruption - connect rural and urban areas.

Presenter: Manohar Velpuri, Institutional partner to United Nations (Innovation networks)
Disclaimer: Views expressed in this presentation donot necessarily reflect those of United Nations system or its member states.
Source:
News letter first edition of Urban rural linkages November 2019
~ figures are blurred intentionally.
Please refer to actual source
<table>
<thead>
<tr>
<th></th>
<th>Sun (Nov. 10)</th>
<th>Mon (Nov. 11)</th>
<th>Tue (Nov. 12)</th>
<th>Wed (Nov. 13)</th>
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<tbody>
<tr>
<td><strong>Morning</strong></td>
<td>8:30 - 12:00 Guest Arrival &amp; Registration (in Tianyuan Mingdu Hotel &amp; Xinliandi Hotel)</td>
<td>9:00 - 12:00, Field Trip 1 (In Shimenyu Bridge, Brown Sugar Factory, Damushan Tea Garden)</td>
<td>9:00 - 12:30, Field Trip 2 (Side Event 1: in Hakka indenterure Museum, Tofu Factory. Side Event 2: in Hengkang Village &amp; Bamboo Pavilion)</td>
<td>9:00 - 11:30, Round Table Forum (In Tangtian Mansion)</td>
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<td><strong>Afternoon</strong></td>
<td>13:00-20:00, Guest Arrival &amp; Registration (in Tianyuan Mingdu Hotel &amp; Xinliandi Hotel)</td>
<td>13:30-14:00, Tree Planting Event (In International Friendship Garden)</td>
<td>14:00-17:00, Field Trip 3 (Side Event 1: In Pinglian Village. Side Event 2: In Shangtian Village)</td>
<td>Participants departure</td>
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<td>Welcome remarks by co-hosts, Organizer, Provincially city leaders</td>
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<td>14:40-15:00, Coffee Break</td>
<td>15:00-17:00, Keynote Speeches (In Tangtian Mansion)</td>
<td>16:00-17:00, Keynote Speeches (In Tangtian Mansion)</td>
<td>18:00-19:30, Dinner (In the Hotel)</td>
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<td>Round 1: Rural Value Discovery</td>
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<td>Round 2: Rural Innovative Practice</td>
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<td>Each Round: 4 speakers in total, 3 International + 1 Domestic, 10 mins/Person + 15 mins discussion</td>
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<td><strong>Dinner</strong></td>
<td>18:00-19:30, Dinner (In the Hotel)</td>
<td>17:30-19:00, Welcome Dinner (In Tianyuan Mingdu Hotel)</td>
<td>18:00-19:30, Dinner (In the Hotel)</td>
<td>18:00-19:30, Dinner (In the Hotel)</td>
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<td><strong>Evening</strong></td>
<td>19:30 - 21:00, Visit (in Songyang Ancient Street)</td>
<td>19:15 - 21:15, Networking (In the hotel)</td>
<td>19:15 - 21:15, Networking (In the hotel)</td>
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Linking Guiding principles to SDG and NUA

Source: Implementation of the New Urban Agenda by Strengthening Urban-Rural Linkages – Leave No one and No Space Behind

Above figures are blurred intentionally., Please refer to actual source
“This seems to be confirmed by the data: the association between lights and GDP is substantially stronger in countries where agriculture is less important. This calls for the inclusion of other remote sensing data into the model, such as rainfall or vegetation indices.”

Source: UN specialised agencies - Worldbank
What is Disruptive Technology?
Disruptive Technologies explained…UN specialised agencies (Worldbank)
Case study: China
In words of H.E. Xi Jinping

“New Era, Shared Future” - “Of the problems confronting the world economy, none can be resolved by a single country alone. We must all put the common good of humanity first rather than place one’s own interest above the common interest of all.”

- First, let us work together to build an open world economy through cooperation.
- Second, let us work together to build an open world economy with innovation.
- Third, let us work together to build an open world economy for mutual benefits.

First, China will continue to open up its market: China has a population of 1.4 billion. Its middle-income population is the biggest in the world.

Second, China will continue to optimize its opening-up structure.

Third, China will continue to improve the business environment (Ease of Doing Business - 31 (was 46))

~ gear up reforms regarding key links and areas

Fourth, China will continue to deepen multilateral and bilateral cooperation - actively engaged in cooperation within the United Nations, the G20, APEC, and BRICS to move economic globalization forward.

Fifth, China will continue to advance Belt and Road cooperation.

Source: Excerpts from the Key note speech at the opening ceremony of Second China International Import Expo – 5th November, 2019
Innovations on Rural Industrialization

China: systematically promote rural construction in the aspects of economy, politics, culture, society, ecological civilization and party building, and exploring a new path for rural revitalization in line with ecological conservation.

“Trade is an important connecting factor in rural and urban linkages and we propose to improve bilateral relations with win-win tariff structures connecting rural areas directly to ports ex: belt and road initiatives”

6G - “agriculture integrates with other industries such as agro-processing, leisure tourism, and cultural creativity”
5G in China

World’s largest market for 5G: >400 million users by 2025
Available from November 2019
- Video surveillance
- VR Teaching
- Smart banking

6G next year?…. (South Korea being the 1st country to implement 5G)

Canada and China on 5G? (Hauwei…) vs Intelligence 5eyes
Source: file photo
To date, China has signed 197 documents on Belt and Road cooperation with 137 countries and 30 international organizations.
Implementation of the “Enabling Framework for the Innovation BRICS Network (iBRICS Network)”, Establishment of an integrated Hub for BRICS Innovation Collaboration on ICT.
“Last Fairy Land – South of Yangtze River”
- 80% of population depends on farming
- 80% is hilly – 80.4% Forest cover, 100% Groundwater quality
- China’s innovation demonstration Award
- 30 Asian classi buildings Damu Tea room
- Many colleges that connect to universities across country
- Last mile problem of transportation
- Green Tea Index
- 5700 (increase) in last 3 years permanent population
- Ecological development investments 600Mn RMB
- High seasons : 50.3% villages has home staying, 520 home staying has >400 beds available
- 181.9Mn Tourists, 120Mn RMB Revenues (20% increase year on year)
- 280Mn RMB investments for Preservation of traditional villages & obsolete houses rescue.
- Folk festivals – 100 events / year
- 270 colleges that connect to universities across country
- Coconstruction & sharing, High Quality development
- Transportation connectivity – Circular transport (100Mn RMB)

Source: Excerpts from Presentation by H.E Magistrate of Songyang County People’s government
Songyang – Shimenyu Bridge, Brown Sugar Factory

- Brown sugar village industry
- Village admin office
- Tourists - resting space and market exchange
- Upgraded techniques ecological material is used as fuel - env protection and high degree of heating (tea leaves) instead of wood
- Innovated the stove - Circular economy
- Higher quality brown sugar - 2hrs lesser production time
- Intangible culture program - Asian China techniques
- Techniques traditional
- 8 Yuan/500g to 25yuan/500g

Source: Excerpts from Hon’able Secretary of CPC Songyang County party committee, China
Songyang : Hengkeng Village, Bamboo Pavillion

Inspirations: Restoring cultural architecture, Legacy of China, Safeguarding intangible Asset
“Rural areas are the hub of emotions” - (H.E Deputy Magistrate of Songyang County People’s Government, China)
- Antique old houses (143 old houses) – celebration of local spring festival
- Own paintings (Village 798) – 200K students – Artistic studio
- Modernising Bamboo, handmade tools from Bamboo.
Songyang – ShangTian Village

12 Km from the Country town – 520m altitude – 4 natural villages: Shang Tian, Yangmeipin, Shangcanglin, Banlin
Shang Tian – Situated on the Terrain
- 933 mu cultivated lands, 868mu Forests
- 8 historical and cultural buildings
- In 2018 – 134 households, more than 368 residents
- In 2016 – it was announced as the fourth batch of Chinese traditional village by 7 ministries including Ministry of Housing and Urban-Rural development, Ministry of Culture and Ministry of Finance.
- Vegetables (Riceshoots, Garlic, Ginger, Greenbean, Radish etc)
- High mountain fruits
- National Hiking every year – 5 times.
- Settlement of descendants – Songlian (scholar Song dynasty 960-1279AD)
- Renovations are happening ....
- Houses – primarily use (wood, mountain rock, bricks, mortar)
- Surveillance cameras on almost every important building’s roof tops.
- Tofu preparation that is environmentally friendly with no smoke chimneys
Songyang – 5 Stages of Rural Revitalization

2007-2011 (awareness, no advantage industrial dev)

2011-2013 (exploration)

2013-2015 (Architect – Xu TianTian - preservation and innovation 8/9 projects accepted by national govt, Primeministerial visits by UK primerminister)

2015-2017 (Internationalization, UN agencies)

2017- (Art exhibitions Are you replicating success? Accupuncture…) Disruptive Technologies…

Source: excerpts from the presentation of H.E. Luo Deyin, Vice Chairman, Traditional village expert steering committee of Ministry of Housing and Urban-rural development, China
Precision agriculture, Transform rural economy farmers, Mountainous boutique hotels
Connecting APP’s – Alipay, Weibo all facilitating URL
ex : Honey revenues increased by 10Mn RMB
Green pathways for cyclists
Young people core of rural transformation
Start-up-capital and Agribusiness Funds may be set up…
Robotics, Drones, Digitalisation of markets to traditional traders,
Training opportunities, Blockchain for weather based index,
Documentation of traditional methods –
“feasible to replicate the success”
Social innovation – Gender dynamics is maintained.
Ecological civilisation as backdrop to Rural valorisation is continues…..”Rural people are not left behind”
- National interest and Security
  (Heritage Buildings)
- Training base for artisans proposed.
Case study: Singapore - FOSS
**Singapore – China : Rural Revitalizing**

**Singapore** : Improved seabass bread (Allegro Aqua),
Temasek rice,
Meod (vertical farming) :
194 vegetable, fish and egg farms in 2018, up from 173 in 2010,
leafy vegetables grown locally in 2019 are 13% of all local vegetables up from 12% in 2010.

Singapore recently concluded several MoU’s with Central China at Chongqing* for 5G implementations through Singtel and collaborations to assist rural areas and hospitals. *(Source: PMO, singapore – DPM’ Heng’s visit to China in October, 2019)*

Forum of Small States :
Statement of at the Forum of Small States (FOSS, 107 members) by H.E. PM LEE (Singapore also was invited as Chair of the FOSS), United Nations Newyork on 25th September 2019  - “Small states have no intrinsic relevance to the workings of the international system... Unlike larger and more powerful countries, we do not set the agenda or decide the mega trends….climate change and rising sea levels are an existential threat” . (Source : PMO Singapore at Climate summit)
FOSS emphasised innovations and mechanisms to combat the existential threats. As climate change threatens global food supplies, food security is becoming ever more pertinent, making the drive to transform the local agriculture scene all the more urgent
Case study : Indonesia
Rainfall anomalies such as droughts and flooding have a direct and tangible impact on the lives of millions of crop-growing families. Despite the economic growth achieved in recent years in countries such as Indonesia, rural districts are often prone to food insecurity.

Despite the availability of multiple datasets containing information related to climate-induced disasters, a number of these sources typically provide a fragmented view of the different dimensions of vulnerability in drought- and flood-prone areas.

VAMPIRE, the Vulnerability Analysis Monitoring Platform for the Impact of Regional Events, was developed in response to the 2015 El Niño, in collaboration with WFP and FAO in Indonesia.
The tool provides map-based visualisations that show the extent of drought/flood affected areas and the impacts on population and crops. In addition, it provides an indication of a potential flood event, 3-days ahead.

Fusing multiple databases:

- **First**, it visualises the national socio-economic survey and population density. This data provides information on the percentage and distribution of poor, agriculture-dependent populations and food security in terms of access;

- **Second**, it analyses satellite-based data on rainfall and vegetation health. Rainfall indices include rainfall anomaly and days since last rain. The Vegetation Health Index is utilised to indicate health and condition of vegetation, and can serve as a proxy for agricultural drought; and

- **Third**, based on the structural characteristics and exposure to drought/flood, the tool can identify priority areas where people may require assistance, and identify crops at risk.
VAMPIRE FEATURES

1. BASELINE LAYER

Population Below National Poverty (%)
VAMPIRE FEATURES

2. CLIMATE LAYER

Flood Hazard Forecast (magnitude)
3. IMPACT LAYER

Crops Affected
Populations Impact
VAMPIRE Scaling Up

- VAMPIRE is installed in the Situation Room of the Executive Office of the President of Indonesia, where as part of an early warning system it is being used to provide aid to farmers following a disaster via the Ministry of Agriculture.

- VAMPIRE was contextualised to Sri Lanka and embedded within the Ministry of Disaster Management.

- In 2017, VAMPIRE won the WFP Innovation Award.

- In 2018 a joint team from PLJ and WFP participated in WFP’s Innovation Accelerator Bootcamp where VAMPIRE was pitched to 200 investors.

- VAMPIRE received funding from WFP’s sprint programme to scale up the tool into a practical solution for the region.

- VAMPIRE’s code will be made open source to allow others to apply the code and integrate the tool into their operations.
VAMPIRE
Policy & Decision Making

- Informed decision making based on near real-time data
- Prioritized locations for disaster intervention
- Informed review of fund allocation for disaster-prone areas
- Triggered cross-ministerial collaboration on data sharing for impact-based early warning
Conclusions – Songyang Consensus
Innovations on Rural Industrialization

Cases of rural revitalization in eco-agriculture, rural tourism, folk house economy, cultural creativity

Ecocivilization

Architectural occupupuncture

Rural revitalization is unsustainable without industrial revitalization

Renewable energy contracts
**Energy Access (2050)**

**INDIAN SUBCONTINENT**
500 million more people and GDP growing fourfold will see rising energy demand in this region.
Despite the rapid growth of renewables, fossil energy sources will still represent 65% of the energy mix in 2050.
The region’s enormous two- and three-wheeler vehicle fleet will transition almost entirely to electricity before 2040.

**GREATER CHINA**
Undisputed leader in the energy transition, topping expansions in renewable power.
The share of electricity in final energy demand will grow from 21% in 2017 to 52% in 2050, the highest of all regions, over 90% from renewable sources.
China’s energy mix, currently dominated by coal, will reduce its coal share from 60% to 15% over the forecast period.

**SOUTH EAST ASIA**
Energy demand, especially from space cooling and appliances, will grow before leveling off towards 2050.
Electricity expands from 15% to 41% of final energy demand during the forecast period, with strong contributions from solar PV and offshore wind.
Manufactured goods production tripled to 2050, driving demand for natural gas and transforming this region into a net-importer of LNG.

**OECD PACIFIC**
Primary energy use will fall more rapidly than the population decline in this region.
2050 electricity mix is dominated by wind, and at 50% of final energy demand, is the second-most electrified region in 2050 after China.
Hydrogen will gain a foothold (6% of energy use), sourced initially from Australia through SMR processes, but later mainly via electrolysis.

**Source**: SIEW 2019, Singapore
Disruptive Tech role in Songyang Consensus

Industrial transformation in APAC – already ongoing

Refer: Industry 4.0 - smartness readiness index.

Nov, 2022 – 29th International Transport world congress – AV (in Suzhou)

Export and Import as part of BRICS, RCEP (ASEAN+6) – trade agreements and investments

we propose to research on disruptive technologies which might increase more linkages of urban to rural areas. 
Songyang Innovative Rural Development Programme could be an impetus to revitalizing rural in urban context too.
• Thank you