Need for a Second Green Revolution
has been recognized around the world and in India…. 

Alliance for Green Revolution in Africa
The time has come for African farmers to wage a “uniquely African Green Revolution.”

UN Secretary-General Kofi Annan

“There is an immediate need of Green Revolution in the country. The Green Revolution should immediately start in eastern India including Jharkhand, Bihar, eastern Uttar Pradesh, West Bengal, Odisha and Assam,”

Prime Minister Narendra Modi

“It is time we give importance to agriculture sector. For the second green revolution, we have to bring reforms in the various avenues of this sector, such as land, farming, seeds, etc,”

Arvind Pangariya, Chair Niti Ayog
ICID Foundation Day Seminar
Second Green Revolution

Role of Irrigation and Drainage

- Articulate the objectives of the Second Green Revolution;
- Understand the means of achieving these objectives;
- Identify various activities, schemes and programs that would support the objectives;
- Comprehend and articulate the role of irrigation and drainage in SGR;
- Sensitize all possible actors, sectors and stakeholders that can and have to contribute to meet the objectives of SGR.

Green Revolution
GR 1.0

Objective: To eradicate hunger
With rural development almost as a bye-product
What did we miss in GR 1.0

I. Policy
II. Planning
III. Implementation
IV. Management
V. Capacity

- **Basin management**: Lack of policy and implementation mechanism
- **Linkages**: Agriculture and rural policies failed to factor water as an important ingredient
- **Equity**: Certain parts of the country did not receive due attention; head reach and tail reach
- **Long-term vision**: Policies had short-term goals: e.g., pricing of water and electricity
- Protracted planning: Water dispute resolutions mechanism delayed planning
- Clear objectives: Irrigation systems largely designed for safety against droughts: only 50% of the Tungabhadra command area was designed to be irrigated
- Crop design: for the irrigation system without taking into account the water availability
- Drainage: as a preventive measure did not get the required attention

- Timely completion of projects: thin spreading of resources
- Gap between IPC and IPU
- Monitoring of safeguards recommended by planning commission while approving the projects
- Collection of irrigation fee
- Water Use Efficiency: Performance indicators (Bench marking) of LIS was not readily adopted
Irrigation Development

- Parameter
  - Total Geographical area
  - Total Cultivable Land
  - Ultimate Irrigation Potential
  - Potential Created
  - Potential utilized
  - Sown Area
  - Irrigated Area

Benchmarking – A way forward to improving performance

- Performance before benchmarking
  - Performance gap
- Performance after benchmarking
  - Performance gap narrowed, removed or overtaken

Gap analysis and implementation of action plan

“Best practice” performance
- **Wastage of water**: Farm level approaches to optimize water use did not get implemented
- **Maintenance**: of irrigation systems did not get required funding
- **No measuring of the water supplied**
- **Indiscipline**: in ayacut resulting in inequity between upstream and downstream users
- **Participation of stakeholders** in the management of LIS - initiated very late and has not been effective
- **No drought monitoring** and warning: followed by contingency plans

Agriculture cannot be made solely dependent on rains as it amounts to gambling with the nature.

- Kauṭiliya's Arthshastra, 371 BC
- **Support to farmers**: for participation in managing irrigation systems
- **Irrigation as a Service**: Irrigation Institutions were not service oriented
- **Cadre management**: of irrigation departments and their capacity to adapt to new challenges remains limited
- **Social skills**: Irrigation managers lacked negotiation and dispute resolution skills
- **Effective WALMIs**: could not serve their designed purpose

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### Key message

- **Knowledge Intensive Development**
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**Convergence through Collaboration and effective Coordination is IMPARATIVE**

**Ignore Technology at your own RISK**
WELCOME
to

Mission: Enhance the science based discourse in policy making and field implementation in Agriculture Water Management in India