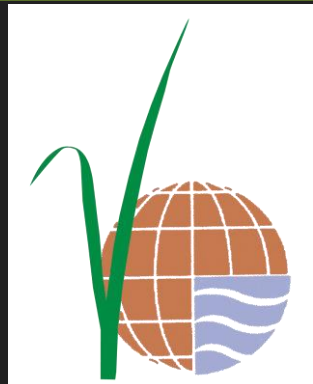


Community led rejuvenation of Urban water commons – DHAN's Experience in Madurai City

N.Venkatesan,
CEO,
DHAN VAYALAGAM (TANK) Foundation



Learning from Workshop on state of waterbodies and lakes in Southern India

held at Pondicherry on 29 Feb 2016

- Enhanced understanding on climate change extremes and the response of cities through rejuvenating water bodies
- Helped in understanding various waterbodies rejuvenation models in urban context
- Served as a platform to knowledge sharing and networking with domain experts and grassroots actors
- Helped to take communities to visit those models to gain confidence and develop their own designs

Vayalagam – DHAN's water initiative

- Community owned conservation and maintenance
- Erivariyam
- Virtue
- Indigenous water wisdom

200 BC – Pre colonial Period

- Ryotwari system
- Government owned and maintained
- Structural Modifications

British Period

- Government owned
- Piece meal investments
- Alienation of community from water bodies
- Ignoring traditional community Practices

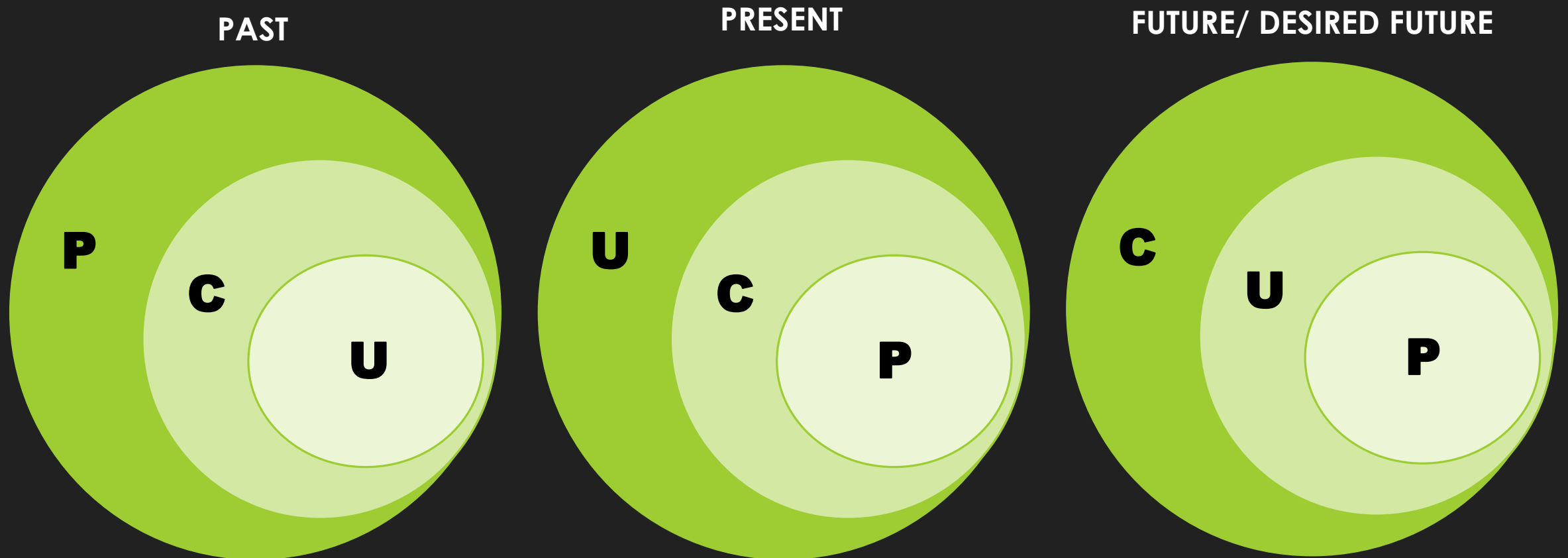
Post Independence

- So far restored 4500+ waterbodies through people institutions
- Working across 12 river basins



Kudimaramath refers to the traditional system of tank management widely practiced before independence. Kudi means the villagers, maramath means maintenance work. A village elder, assisted by a committee, would coordinate and motivate the local community to maintain the irrigation structures. Villagers provide their labour freely. The Vayalagam tank farmers' organisations have revived the practice of Kudimaramath in all the conservation works taken up by them.

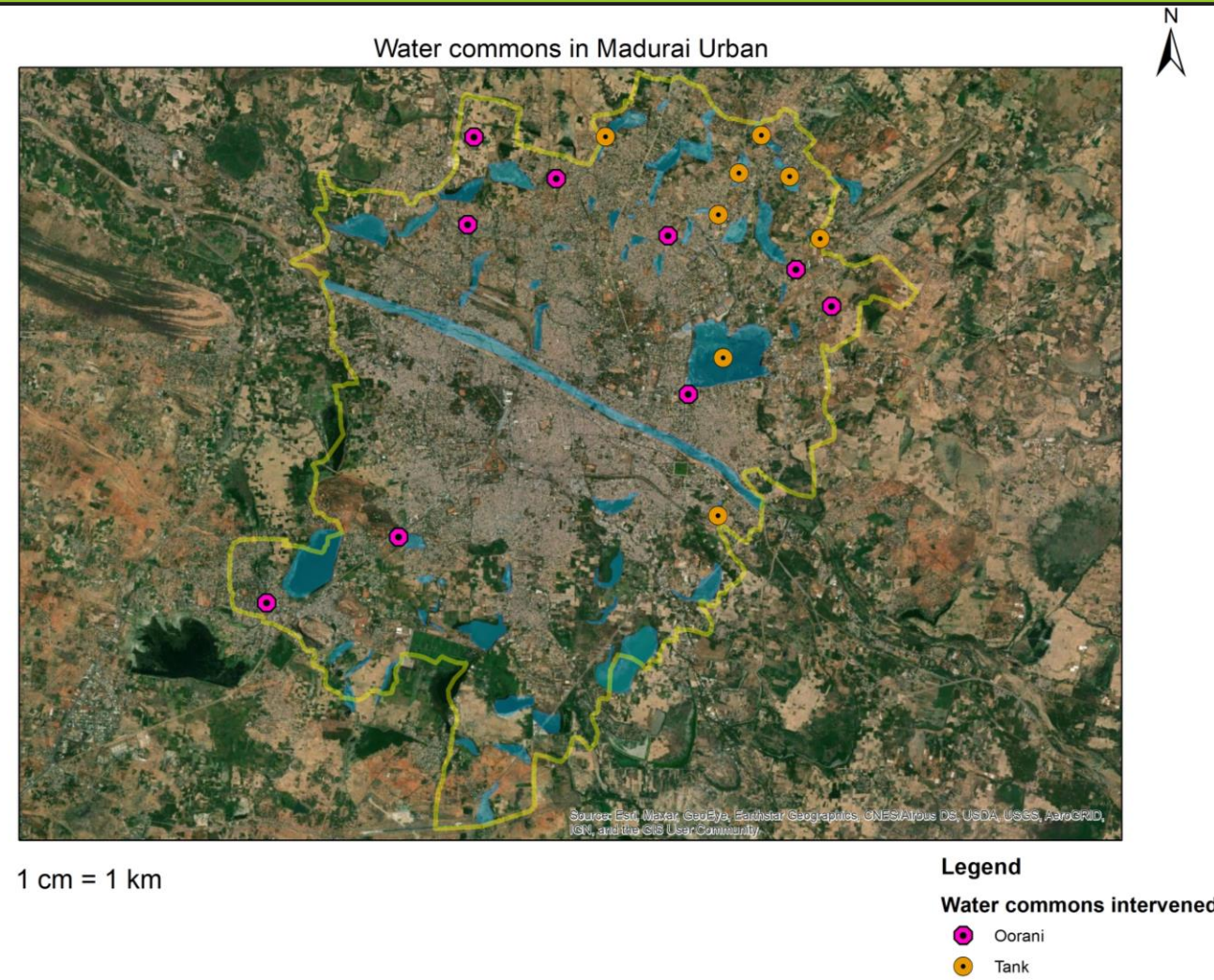
Change in Perspective of Commons: DHAN's Understanding



P = Preservation ; C= Conservation ; U = Use

Vayalagams in Urban context (CURE)

- Madurai under Urbanisation: The History of “Kadambavanam to Thoonganagaram”
- Despite the urban pressures, the city has 55 irrigation tanks, 34 ooranis (ponds), and 12 temple tanks
- So far intervened in 9 ooranis, 6 irrigation tanks, 1 sewage fed tank through community organisations- Vayalagam



Practicing the lost culture: Tank bed cultivation in Mangalakudi irrigation Tank



- An urban tank with **zero command area under cultivation**
- Tank bed cultivation using soil moisture – a traditional practice lost between 2004-2018
- In 2019, **Managlakudi tank conservation vayalagam** restored practice @ **12 acres** of water spread area by **65 landless families** (0.18 acres each) of Mangalakudi irrigation tank
- Cultivating **bitter guard, cucumber, brinjal** for local market and self consumption
- Average Income of Rs.22500 (per season of 3 months)
- An effective strategy against **Prosopis Juliflora Invasion**, a major concern in Tanks of Tamil Nadu

From Nuisance to New sense: Story of Sooravali medu Kanmoi



- Once an irrigation tank that supported 12.5 acres of paddy fields
- Ignored, encroached for about 37 years; Ground for alcoholics
- Restored by 'Sooravalimedu tank restoration vayagalam' (inclusive of residents, youth and women SHGs)
- Conversion of Abandoned Tank into Recreation Pond
- Community preferred children park and walking track over conversion of open channel to piped inlet channel
- Desilted 8500 cu.m; Uplanted Prosopis, Restored feeder channel, Evicted Encroachments, Created bunds
- Recreational components brought children and women to relate with waterbody



Water commons - A knowledge space: Kalthar oorani



- A drinking water pond used before 45 years, Lost its feed due to change in catchment area characters and encroachment of channel
- Completely disconnected from 'new' (≈ 15 years) urban locals
- Rejuvenation of Pond along with the abandoned 'public' library
- Desilting, bund strengthening, Walking pavement, Encroachment eviction, construction of access Ghat
- Led by women People Institution (Jaihindpuram Vattara Kalanjiam federation): a strategy to tackle politically influenced local encroachers



Water commons rebuilds relation: Nila oorani



- Once an 'Nila Yendhal' of Ulaganeri irrigation tank that has been converted into 'Honourable Madras High Court – Madurai Bench', supplemented 17.3 acres of Paddy fields
- Abandoned for 33 years; with storage capacity of 27 cu.m.
- Restored into 'Nila oorani' with 10,000 cu.m. of capacity
- No community stakeholder around 400 m radius – a rare scenario in urban
- Desiltation process brought back the traditional water users who are residing 1 km away from the water commons
- Contributed through planting 500 plants in the bund and maintaining it; Led the next phase of rejuvenation
- Training their 'Kidaai' and 'Sandai Seval' for animal sports; Supports livestock rearing nomads; Swimming spot for youth



Towards safe usage of sewage for Agriculture: Kaathiyanoor Kanmoi



- Once an Irrigation tank fed by river Vaigai, A Wakf property of Kajimar Big Mosque, Leased to farmers of Kaathiyanoor
- Sewage fed irrigation for more than 60 years
- Abandoned post JnNURM, due to blockage of feeder channel
- Rejuvenation of feeder channel along the dense urban fabrics in 2017 by 'Kaathiyanoor tank farmers vayalgam' with 25% financial contribution.
- Currently supporting, 25 landless urban families cultivating 36 acres of command area, fed by raw domestic sewage
- Communities visited several 'nature based' solutions across the country, collectively developed plan, piloted constructed wetlands and currently, marching towards developing combating mechanism against water hyacinth invasion
- Improved DO from Zero to 5 ppm in few pockets, reared fish in 2020-21 (Especially hardy fishes); hosts several wetland birds



DHAN's approach in rejuvenation of urban water commons

- Identification of financial resources and scope for rejuvenation: **Water Watch Newsletter**
- History matters: Mapping **time line of the waterbody**
- Promotion of Water users association: **Vayalagam**: Inclusive, democratic, responsible stake
- Collectively develop the rejuvenation components with key stakeholders: Prioritisation and Finalisation of rejuvenation plan
 - ✓ To rejuvenate waterbodies and rebuild the lost relationship between communities and water commons
 - ✓ Break down complex to simple so that community shall implement effectively
 - ✓ Add revenue generating components wherever applicable
- Collectively prepare estimates for the rejuvenation – Modifications and Finalisation approved by key stakeholders
- Implementing rejuvenation plan by Vayalagam with **Techno-managerial support** of DHAN Professionals
- Integrating or revitalising '**hybrid**' **cultural practices** with inbuilt traditional wisdom: Tank bed cultivation, Tank festivals
- Practicing community monitoring and maintenance process: **Wetland walk, festivals, camps, memorial day celebrations**

Rejuvenation principles: Learning from our intervention

- **Principle 1: Co-develop rejuvenation plan by communities inclusive of marginal communities**
- **Principle 2: Multiple stakeholder approach**
- **Principle 3: Simple for community to handle**
- **Principle 4: Hydrologic system approach**
- **Principle 5: Policy for Tanks**
- **Principle 6: Self - revenue generative**
- **Principle 7: Regenerative**
- **Principle 9: Cost effective**
- **Principle 10: Reflect nativity**
- **Principle 11: Integrating culture and heritage**
- **Principle 12: Multi-dimensional services**
- **Principle 13: Infection free**
- **Principle 14: Community governance**
- **Principle 15: Evolutionary in nature**

THANK YOU

