



Traditional 'Pomona' type turbine water pump and pumping station

Cooperative for Drilling and Exploiting a Private Water Well (Grèce)

Συνεταιρισμός με Σκοπό την Εγκατάσταση και Λειτουργία Ομαδικής Γεώτρησης

DESCRIPTION

A cooperative of land owners and at least one water rights owner established to jointly establish and manage a private freshwater well.

Aims / objectives: The approach is implemented for deep water wells where installation costs are high. It provides an option for land owners to abandon their low quality shallow wells (such as those on coastal aquifers) for a better quality well (e.g. inland) located in a remote property. The objective of the cooperative is to share costs and risk while securing a sustainable water quality for its members.

Methods: A cooperative is formed with interested land users and shares are distributed depending on individual financial contribution to the drilling cost. Additional costs are either apportioned to coop members (e.g. common buffer tank) or managed individually depending on agreement. Apart from actual value, shares also represent the fraction of water rights of each member. Therefore, every member can consume up to their rights fraction or lease from other members who have consumed less than their rights fraction. Water consumption is usually measured indirectly through power consumption at the pump and a common log is kept to split bills power bills when issued.

Stages of implementation: Initially, a land owner secures a well installation permit from the Water Authority. If it is a requirement to form the cooperative as a legal entity then an advocate is required. The coop elects 5 members to serve as president, treasurer, secretary and alternates. During the installation phase, members of the cooperative share costs according to their agreement. During the operation phase, costs are covered according to user consumption.

Role of stakeholders: The Water Managing Authority needs to provide a permit for the drilling and a geologist needs to oversee and sign for the drilling. Cooperative members need to be timely in their financial obligations in order to cover bills and maintenance costs on time in order to avoid interruptions of the water service for the entire group.

Other important information: This approach was documented within the scope of FP7 RECARE Project, funded grant agreement no 603498.

LIEU

Lieu: Timpaki, Heraklion, Grèce

Géo-référence des sites sélectionnés

- sans objet

Date de démarrage: 2005

Année de fin de l'Approche: sans objet

Type d'Approche

- traditionnel/ autochtone
- initiative/ innovation récente locale
- fondé sur un projet/ programme



Submersible pump and distribution network (I. Daliakopoulos)



Traditional 'Pomona' type turbine water pump and pumping station (I. Daliakopoulos)

OBJECTIFS DE L'APPROCHE ET ENVIRONNEMENT FAVORABLE

Principaux objectifs de l'Approche

The Approach focused mainly on other activities than SLM (Securing good quality water at adequate quantities, reduce costs per capita)

The objective of the Approach are to share costs and risk while securing a sustainable water quality for its members. This way land owners have additional options for usign good quality water at an affordable cost.

The SLM Approach addressed the following problems: Lack of cash to invest

Conditions favorisant la mise en oeuvre de la/(des) Technologie(s) appliquée(s) sous l'Approche

Conditions entravant la mise en oeuvre de la/(des) Technologie(s) appliquée(s) sous l'Approche

- **Disponibilité/ accès aux ressources et services financiers:** High cost of a good quality (deep) well at a sufficient distance from the sea to prevent saltwater intrusion. Treatment through the SLM Approach: Group of land users share the cost of drilling and become shareholders of the well. The amount of shares of each shareholder is proportional to the assets invested in the installation.
- **Cadre juridique (régime foncier, droits d'utilisation des terres et de l'eau):** New regulations discourage or ban the installation of new wells in order to regulate the quality and quantity of groundwater in the area. Also selling water without a permit lays at a legally gray area. Treatment through the SLM Approach: Well shares (representing water rights) can be exchanged or rented among shareholders and sold to new shareholders. Therefore water rights can be distributed without new wells being drilled. The existing land ownership, land use rights / water rights hindered a little the approach implementation At least one of the members of the cooperative needs to own land and user rights at a location suitable for drilling.
- **Connaissances sur la GDT, accès aux supports techniques:** Water wells require an intermediate buffer water tank. Treatment through the SLM Approach: In the case of a collective installation can be single (rather that each shareholder installing a separate water tank) thus reducing costs due to the economy of scales and saving space.

PARTICIPATION ET RÔLES DES PARTIES PRENANTES IMPLIQUÉES DANS L'APPROCHE

Parties prenantes impliquées dans l'Approche et rôles

Quels acteurs/ organismes d'exécution ont été impliqués dans l'Approche?	Spécifiez les parties prenantes	Décrivez le rôle des parties prenantes
exploitants locaux des terres / communautés locales	Farmers, agriculturalists	
Spécialistes de la GDT/ conseillers agricoles	Water well drilling specialists	
gouvernement national (planificateurs, décideurs)		Water permits are eventually issued by the Water Authority

Participation des exploitants locaux des terres/ communautés locales aux différentes phases de l'Approche

	aucun	passive	soutien extérieur	interactive	auto-mobilisation	
initiation/ motivation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Land users forming the cooperative
planification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The board of the coop adjusts pricing and plans distribution networks in cooperation with the members.
mise en œuvre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Construction work by land users who might have the resources to help.
suivi/ évaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The board monitors water quality, water level and user consumption.
Research	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Diagramme/ organigramme

Prises de décision pour la sélection de la Technologie de GDT

Les décisions ont été prises par

- les exploitants des terres seuls (auto-initiative)
- principalement les exploitants des terres soutenus par des spécialistes de la GDT
- tous les acteurs concernés dans le cadre d'une approche participative
- principalement les spécialistes de la GDT, après consultation des exploitants des terres
- les spécialistes de la GDT seuls
- les responsables politiques/ dirigeants

Les décisions ont été prises sur la base de

- l'évaluation de connaissances bien documentées en matière de GDT (prises de décision fondées sur des preuves tangibles)?
- les résultats de recherches?
- expériences et opinions personnelles (non documentées)

SOUTIEN TECHNIQUE, RENFORCEMENT DES CAPACITÉS ET GESTION DES CONNAISSANCES

Les activités ou services suivants ont fait partie de l'approche

- Renforcement des capacités/ formation
- Service de conseils
- Renforcement des institutions (développement organisationnel)
- Suivi et évaluation
- Recherche

Renforcement des capacités/ formation

La formation a été dispensée aux parties prenantes suivantes

- exploitants des terres
- personnels/ conseillers de terrain

Formats de la formation

- sur le tas
- entre agriculteurs (d'exploitants à exploitants)
- zones de démonstration
- réunions publiques
- cours

Sujets abordés

Use of the pumping system, pricing system, sustainable water use, legal issues.

Suivi et évaluation

bio-physical aspects were monitored by land users through measurements; indicators: water salinity, pH, pollutants, level of the water in the well economic / production aspects were monitored by land users through observations; indicators: consumption of water/power by each shareholder There were no changes in the Approach as a result of monitoring and evaluation There were no changes in the Technology as a result of monitoring and evaluation

FINANCEMENT ET SOUTIEN MATÉRIEL EXTERNE

Budget annuel en dollars US de la composante GDT

- < 2 000
 - 2 000-10 000
 - 10 000-100 000
 - 100 000-1 000 000
 - > 1 000 000
- Precise annual budget: sans objet

Approach costs were met by the following donors: local community / land user(s) (Establishing the cooperative as a legal entity): 100.0%

Les services ou mesures incitatives suivantes ont été fournis aux exploitants des terres

- Soutiens financiers/ matériels fournis aux exploitants des terres
- Subventions pour des intrants spécifiques
- Crédits
- Autres incitations ou instruments

ANALYSES D'IMPACT ET CONCLUSIONS

Impacts de l'Approche

Est-ce que l'Approche a aidé les exploitants des terres à mettre en œuvre et entretenir les Technologies de GDT?

- Non
- Oui, un peu
- Oui, modérément
- Oui, beaucoup

Est-ce que l'Approche a autonomisé les groupes socialement et économiquement défavorisés?



Est-ce que l'Approche a amélioré les questions foncières et des droits d'utilisation qui entravent la mise en œuvre des Technologies?



Did other land users / projects adopt the Approach?



Principale motivation des exploitants des terres pour mettre en oeuvre la GDT

- augmenter la production
- augmenter la rentabilité/ bénéfice, rapport coûts-bénéfices
- réduire la dégradation des terres
- réduire les risques de catastrophe
- réduire la charge de travail
- paiements/ subventions
- règles et règlements (amendes)/ application
- prestige, pression sociale/ cohésion sociale
- affiliation à un mouvement/ projet/ groupe/ réseaux
- conscience environnementale
- coutumes et croyances, morale
- améliorer les connaissances et compétences en GDT
- améliorer l'esthétique
- atténuer les conflits

Durabilité des activités de l'Approche

Les exploitants des terres peuvent-ils poursuivre ce qui a été mis en oeuvre par le biais de l'Approche (sans soutien extérieur) ?

- non
- oui
- incertain

CONCLUSIONS ET ENSEIGNEMENTS TIRÉS

Points forts: point de vue de l'exploitant des terres

- Reduces start-up costs for well construction and subsequent risks, allows for deeper wells far from the salt intrusion zone thus providing a more sustainable water quality.

Points forts: point de vue du compilateur ou d'une autre personne-ressource clé

- Provides the financial means to drill wells far from the salt intrusion zone, thus reducing the risk of enhancing salt intrusion. It is also an indirect way of reducing illegal pumping by consolidating water users to a more easily manageable and accountable entity. (How to sustain/ enhance this strength: Imposing pumping limits so that water use is sustainable. Provide motives to join cooperatives.)

Faiblesses/ inconvénients/ risques: point de vue de l'exploitant des terres comment surmonter

Faiblesses/ inconvénients/ risques: point de vue du compilateur ou d'une autre personne-ressource clé comment surmonter

- Once the well has been drilled, water quantities pumped are difficult to control. This can create tension among users but also lead to over-pumping. A more transparent way of measuring can be implemented (e.g. metering per farm). This of course includes additional costs. Another option is to allow the Water Authority to take control of distribution within the private network and thus impose pumping limits (or at least be aware of the extent of the exploitation).

RÉFÉRENCES

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Description complète dans la base de données WOCAT

https://qcat.wocat.net/fr/wocat/approaches/view/approaches_2619/

Données de GDT correspondantes

sans objet

La documentation a été facilitée par

Institution

- Technical University of Crete (Technical University of Crete) - Grèce

Projet

- Preventing and Remediating degradation of soils in Europe through Land Care (EU-RECARÉ)

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