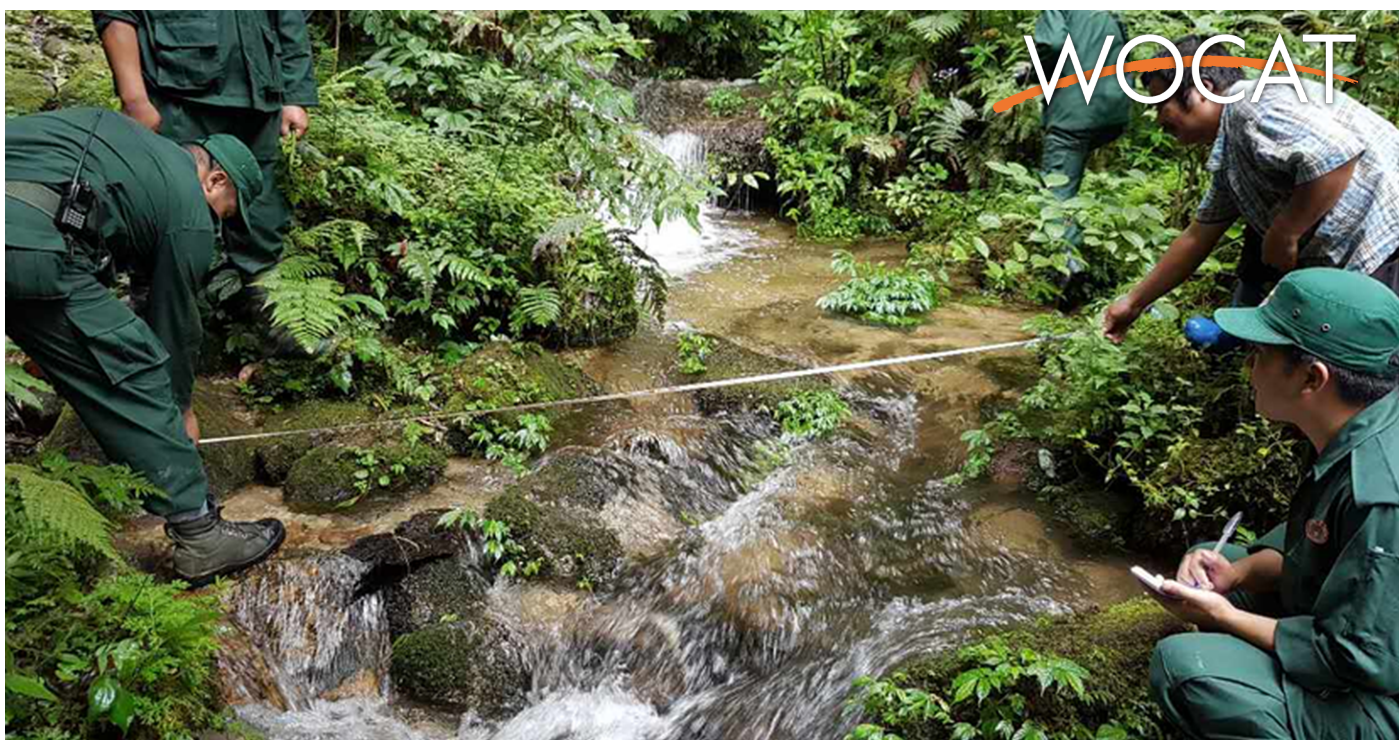




Water source of Patshaling, Tsirang Dzongkhag (Gem Tshering)

Sustaining Drinking Water through Payment for Environment Services (PES) (Bhutan)

Rangzhhin Thakor Zhabtog Lachha Troedhey Thungchhu Yuenten Zhagthab (རང་བཞིན་མཐའ་རྒྱུ་ལྷ་མོ་ཐོད་ཀྱི་ཐུང་ཅུ་ཡུའུ་འཇམ་མགས་ལྷ་མོ་)

DESCRIPTION

This approach compensates land users annually for taking care of a water source and its surroundings. The source is being looked after by two groups of environmental service providers and water is supplied to seven gewogs and Dampchu Municipality in the Tsirang Dzongkhag.

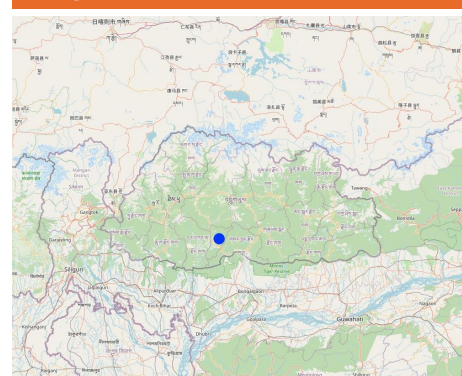
Due to shortages of good quality water, and the need for protection of the watershed to improve quality and quantity, a "Payment for Ecosystem Services" (PES) contractual agreement has been put into place between providers of the services and users. This strategy's primary goal is to maintain the availability of drinking water for places experiencing shortages. The agreement is between the Thakhorling Community Forest Management Group (CFMG) referred to as the "Primary Provider" and Khuchi-Darachhu CFMG as the "Secondary Provider" of environmental services (ES), and the Drinking Water users of Dampchu referred to as "Users" of the drinking water source. Official government intermediaries administer the payment for environmental services (PES) mechanism to ensure that it is implemented successfully between the providers and the user.

Under the agreement,

- The ES Providers pledge that a buffer strip of 100 meters shall be maintained on both sides of the stream, where no vegetation or trees can be removed or harvested, and no grazing is permitted. This helps ensure proper recharging of spring sources as well as improving water quality.
- The ES Providers agree to plant native species annually to rehabilitate degraded watersheds.
- The ES Primary Provider commits to guarding the entire watershed from illegal extraction and overgrazing to improve vegetation cover and to ensure the continuous flow of springs.
- The ES Primary Provider promises to clear stream channels every four months to facilitate continuous flow of water.
- The ES Users take responsibility to pay for all the activities undertaken by ES Providers for the protection of the watershed.
- The ES Providers (both primary and secondary) will receive (approx.) US \$2700 per year from the Users. The payment is included in the monthly water bill, collected by the Municipal Authority of Dampchu, and released to the ES Providers annually. However, in case of increase in water users from current numbers (6000), an additional fee collected will also be released to ES Providers as an additional incentive.
- In the event the ES Provider fails to carry out the activities as agreed, the Dzongkhag Administration has the authority to retain the PES fee of the failed activity and release the fees for other activities.

This agreement is valid for a period of ten years from July 2019 until June 2029 and may be renewed or extended based on the consensus of the parties. To execute the agreement, two

LIEU



Lieu: Thakhorling village, Tsirang, Bhutan

Géo-référence des sites sélectionnés

- 90.17988, 27.0451

Date de démarrage: 2019

Année de fin de l'Approche: 2029

Type d'Approche

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

water user groups were formed with a chair and committee, and these created tight by-laws. Once every three months, the chairman inspects the water source's cleaning process – for which the workers receive compensation. The land users work in groups to preserve the water source and the surroundings, and they are paid annually. Each year, the groups must plant trees on an acre of land (0.4 ha) close to the water supply. Monitoring and evaluation of the PES are conducted twice a year - in June and in December- by the officials from Dzongkhag, Municipal, Thromde and Forest Division. After a successful evaluation, they sign a form which is essential to ensure the annual budget for the PES. Since the water source is in Thakorling, the land users' permission was crucial to supply water to other locations. Many initially opposed the notion of sharing the water source because they believed it would one day result in a water shortage in their own region. But consultations helped them change their minds. Officials gave them assurances that should a water crisis emerge in the Thakorling area, the municipality and Thromde vowed to provide them with water at any cost. Almost everyone accepted the agreement though there are still a small number of people who disagree.



Consultation meeting with the Gewog leaders regarding the PES (Gem Tshering)



Water source (Gem Tshering)

OBJECTIFS DE L'APPROCHE ET ENVIRONNEMENT FAVORABLE

Principaux objectifs de l'Approche

To protect the water source and maintain continuous supply of clean water to 7 geogs, Damphu Municipality and other institutions.

To protect the water source and distribute water to areas where there is a scarcity.

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

- **Normes et valeurs sociales/ culturelles/ religieuses** : The land users were willing to share the water source with the other users.
- **Disponibilité/ accès aux ressources et services financiers**: The funds required to implement this plan were all provided by the government.
- **Cadre institutionnel**: Groups were formed to protect water source.
- **Collaboration/ coordination des acteurs**: The land users worked collectively when they had to clean and carry out maintenance works.
- **Cadre juridique (régime foncier, droits d'utilisation des terres et de l'eau)**: PES group formed for ten years with agreement signed between Parties (Service Providers and Service Users).
- **Cadre politique**: Section 47 of Forest Act 2023 provides support for the establishment of PES.
- **Marchés (pour acheter les intrants, vendre les produits) et prix**: Market and price is determined by the agreement signed between Service Providers and Service Users.
- **Charge de travail, disponibilité de la main-d'œuvre**: Workload is eased by the presence of other land users (availability of manpower).

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

- **Normes et valeurs sociales/ culturelles/ religieuses** : Some land users were against this idea as they thought they might face water scarcity in the community in the future.

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	Land users	Land users formed groups to protect, manage and conserve forests under the ecosystem services.
Thromde, Municipal and Divisional Forest Office.	Thromde, Municipal and Divisional Forest Office.	Conduct PES meetings, allocate budget and monitor and evaluate the activities carried out by the land users.

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

	aucun	passive	soutien extérieur	interactive	auto-mobilisation
initiation/ motivation	✓				
planification				✓	
mise en œuvre				✓	
suivi/ évaluation				✓	

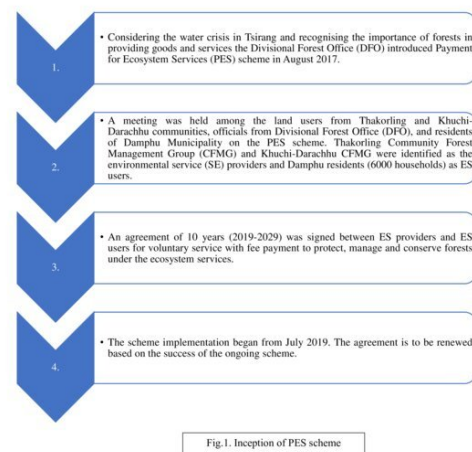
Considering the water crisis in Tsirang and recognising the importance of forests in providing goods and services the Divisional Forest Office (DFO) introduced Payment for Ecosystem Services (PES) scheme in August 2017.

Both land users and government officials were involved while establishing the approach.

ES providers, Thakorling Community Forest Management Group (CFMG) and Khuchi-Darachhu CFMG protect, manage and conserve forests under the ecosystem services. ES users pay for all the activities undertaken by ES providers. Divisional Forest Office looks after the overall conduct of activities in the PES scheme.

Divisional Forest Office and land users were involved.

Diagramme/ organigramme



Auteur : Tshering Yangzom

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
- ☒ Divisional Forest Office and Damphu Municipality in consultation with the land users.

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

Service de conseils

Le service de conseils était fourni

- ☒ dans les champs des exploitants?
☐ dans des centres permanents

The ES providers have to carry out certain regular activities like cleaning the stream, afforestation, guarding community forest against illegal extraction of forest resources, limiting the number of cattle members, and maintaining sanitation and hygiene, among others. The land users have access to advisory services mostly from the Divisional Forest Office.

Renforcement des institutions

Institutions ont été renforcées ou mises en place

- ☐ non
☐ oui, un peu
☐ oui, modérément
☒ oui, beaucoup

au niveau suivant

- ☒ local
☐ régional
☐ national

Décrivez l'institution, ses rôles et responsabilités, ses membres, etc.

The two community forest management groups identified as the ES providers have a chairperson, a secretary, and an accountant each (appointed from among the land users). The land users jointly carry out activities like cleaning the stream, afforestation, guarding community forest against illegal extraction of forest resources, limiting the number of cattle members, and maintaining sanitation and hygiene, among others.

Type de soutien

- ☒ financier
☐ renforcement des capacités/ formation
☐ équipement

Plus de détails

The finances come from the water users annually thereby resulting in the generation of income for the land users/ ES providers.

Suivi et évaluation

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

Environmental services users.

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

Soutiens financiers/ matériels fournis aux exploitants des terres

Finacial support from the environmental services users.

ANALYSES D'IMPACT ET CONCLUSIONS

Impacts de l'Approche

Est-ce que l'Approche a autonomisé les exploitants locaux des terres, amélioré la participation des parties prenantes?
All the land users works collectively in groups to protect, manage and conserve forests

Non
Oui, un peu
Oui, modérément
Oui, beaucoup

☐ ☐ ☒

Est-ce que l'Approche a aidé les exploitants des terres à mettre en œuvre et entretenir les Technologies de GDT?
The land users carry out SLM activities such as afforestation, guarding community forest against illegal extraction of forest resources, limiting the number of cattle members, and maintaining sanitation and hygiene, among others.

☐ ☒ ☐

Est-ce que l'Approche a amélioré la coordination et la mise en œuvre de la GDT selon un bon rapport coût-efficacité?
The land users work collectively towards the shared goal of forest protection via funds from the ES users.

☐ ☐ ☒

Est-ce que l'Approche a mobilisé/ amélioré l'accès aux ressources financières pour la mise en œuvre de la GDT?
The approach has improved access to financial resources via funds from the ES users.

☐ ☐ ☒

Est-ce que l'Approche a amélioré les connaissances et les capacités des exploitants des terres pour mettre en œuvre la GDT?
The land users are mostly engaged in small but important SLM activities such as afforestation, guarding community forest against illegal extraction of forest resources, limiting the number of cattle members, and so on.

☐ ☒ ☐

Est-ce que l'Approche a construit/ renforcé les institutions, la collaboration entre parties prenantes?
All the land users work collectectively in groups to manage and conserve forests.

☐ ☐ ☒

Est-ce que l'Approche a atténué les conflits?
Water crisis has been solved.

☐ ☐ ☒

Est-ce que l'Approche a autonomisé les groupes socialement et économiquement défavorisés?
The land users from various backgrounds are part of ES providers.

☐ ☒ ☐

Est-ce que l'Approche a amélioré l'égalité entre hommes et femmes et autonomisé les femmes et les filles?
Both men and women are in the groups of ES providers.

☐ ☒ ☐

Est-ce que l'Approche a encouragé les jeunes/ la prochaine génération d'exploitants des terres à s'engager dans la GDT?

☒ ☐ ☐

The approach is focused on forest management and conservation and it positively showcases the benefits of managing and protecting the forests.

Est-ce que l'Approche a conduit à améliorer la sécurité alimentaire et/ou la nutrition?

ES providers get some amount from the ES users and this amount increases the access to financial resources. Improved access to financial resources in turn increases the access to improved food or nutrition.



Est-ce que l'Approche a conduit à améliorer l'accès à l'eau et l'assainissement?

ES users have access to clean and continuous water.



Est-ce que l'Approche a amélioré la capacité des exploitants des terres à s'adapter aux changements/ extrêmes climatiques et a atténué les catastrophes liées au climat?

This approach encourages afforestation, reduced overgrazing or clearing of vegetation which can indirectly be related to fighting climate change in small ways.



Est-ce que l'Approche a conduit à des emplois, des opportunités de revenus?

The land users are able to generate income through their environmental services to the ES users.



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

PES scheme is sustainable without external support as long as the ES providers keep on providing environmental services and the ES users pay for the services. Also, this scheme promotes the different practices of protecting, managing and conserving forests such as afforestation, guarding against illegal extraction of forest resources, and limiting the number of cattle which are all sustainable practices.

CONCLUSIONS ET ENSEIGNEMENTS TIRÉS

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

- Improved access to financial resources.
- Deepening of SLM knowledge of the land users because of different sustainable forest management practices carried out.
- Sustainable PES scheme as the fund is generated by the ES users with no reliance on external funding.

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

- Since the land users plant trees each year and have strict rules and regulations to protect the environment, it helps in environmental conservation.
- Help preserve natural resources and educate the local people on how to protect the continuous flow of water from the sources.

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

- Water shortage during winter season. The land users have constructed water harvesting ponds.
- Disagreements in the implementation of plans during the initial period. Held meetings to clear the confusion and solve the disagreements.

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

- Dispute among the members. Through discussions
- Water crisis in the near future as the land users share water from a single source. Protect the water source and use water wisely.

RÉFÉRENCES

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Dernière mise à jour: 30 mai 2024

Personnes-ressources

Lhasang Tamang - exploitant des terres
Dawa Tamang - exploitant des terres
Ganesh Sunwar - exploitant des terres
Basant Kumar Ghalley - exploitant des terres
Bal Bir Rai - exploitant des terres

Description complète dans la base de données WOCAT

https://qcat.wocat.net/fr/wocat/approaches/view/approaches_6862/

Données de GDT correspondantes

sans objet

La documentation a été facilitée par

Institution

- National Soil Services Center, Department of Agric (National Soil Services Center, Department of Agric) - Bhoutan

Projet

- Strengthening national-level institutional and professional capacities of country Parties towards enhanced UNCCD monitoring and reporting – GEF 7 EA Umbrella II (GEF 7 UNCCD Enabling Activities_Umbrella II)

Liens vers des informations pertinentes disponibles en ligne

- Protecting the water source of Damphu town through PES scheme: <https://www.bbs.bt/news/?p=118173#:~:text=Beginning%20this%20month%2C%20the%20residents,forest%20of%20the%20two%20chiwogs.>
- Payment for Environmental Services scheme established in Tsirang: <https://www.facebook.com/search/top/?q=payment%20for%20environmental%20service%20established%20in%20Tsirang%202019>

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