Women actresses of the agroecological transition:

Feedback on IO years of projects by SOL and Navdanya in North India









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Publication manager: Clotilde Bato

Writer: Raphaël Mège

Coordinator: Anouk Halté

Contributors: Audrey Boullot, Axelle Nawrot, Apolline Piquenot

Photographic credits: SOL, Navdanya

Graphic design: Guillaume Buleté

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Introduction

WOMEN IN AGRICULTURE: AN ESSENTIAL BUT UNRECOGNIZED ROLE TO DEFEND AND PROMOTE

The role played by women in agriculture is decisive. The FAO estimates that they contribute half of the world's food production¹. They are often responsible for the preparation of the land, watering, harvesting, storage, processing, and packaging, as well as for the supply of water and the administrative and accounting management of farms. In addition, they are responsible for domestic and community life. These multiple tasks, costly in terms of time and energy, are poorly recognized and rarely paid. In addition, in many countries, women have limited access to natural resources and land and are not involved in decision making, limiting their autonomy which is already very restrained by social norms.

In India, where they suffer strong discrimination, women play a leading role in the selection, conservation, and multiplication of farmers' seed varieties, which contribute to the preservation of local biodiversity.

Recognizing the role of women is essential, for themselves as well as for society, and more globally for the environment and biodiversity.

It is for these reasons that SOL supports the development of farmer and solidarity-based agroecological models in India that recognize and value the central role of women.

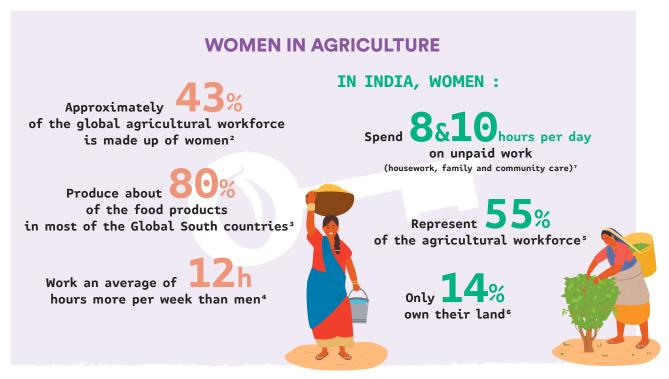
WHY THIS PUBLICATION?

SOL wanted to produce this publication to share its experience in India where, with its partner Navdanya, it has been implementing the Seeds of Hope, Small Farms India and now Seeds of Resilience programs for the past 10 years. From these flagship projects, we have drawn certain lessons, reflections, and new knowledge, particularly concerning the role of women in the evolution of agricultural practices - all good practices that we value in our current projects and that we are keen to share. In these pages, we will focus on the agroecological transition, the selection and use of seeds adapted to the areas of intervention in a context of climate change, and finally the central issue of women's empowerment.

Farmer-based agroecology: a movement for the ecological transition of our agricultural and food systems

Agroecology includes different models that may vary according to the context, but have in common respect for the environment, adaptation to local resources and know-how, replicability at low cost, etc. It is presented as a social movement in defense of sustainable and equitable agricultural and food systems, aiming to guarantee accessibility for all to quality food, while ensuring autonomy and a decent income for farmers and recreating links between rural and urban areas. It is part of a real political project for the benefit of environmental and social justice and human rights.





- 2 FAO. 2011. The State of Food and Agriculture 2010-11. Women in agriculture, closing the gender gap for development. Rome.
- 3 FAO data 2007, Gender in agriculture Sourcebook, World bank, FAO, IFAD, 2009.
- 4 FAO, La situation mondiale de l'alimentation et de l'agriculture. Le rôle des femmes dans l'agriculture. Combler le fossé entre les hommes et les femmes pour soutenir le développement, 2010-2011.
- 5 World bank data, 2019.
- 6 Ministry of Agriculture and Farmers Welfare, India, 2015-2016 census on agriculture, 2020.
- 7 ActionAid International, Addressing Women's Unpaid Care Work: Integrating Agroecology and Women's Economic Empowerment for Climate Resilient Livelihoods, Experiences from Bangladesh, India, Nepal and Pakistan.

I. SOL in India

SOL IN INDIA: A LONG-STANDING EXPERIENCE

It was in India, in the state of Bihar (north-east of the country), that SOL carried out its first projects: the creation, in partnership with local associations, of grassroots pharmacies and the training of health workers in Ayurvedic medicine from 1981 (through the creation of plant gardens) and then of rural health centers from 1982. Since then, SOL has supported about 60 projects in India.

For SOL, these projects were a forerunner of its current work in the agricultural sector in India. They were also a mean of integrating issues related to the participation and empowerment of women, which SOL systematically integrates in all its actions. Thus, since 1988, SOL has conducted several «integrated» development projects throughout India, always with local partners, linking agricultural transition (access to land, training in agroecological techniques, reforestation, livestock breeding, etc.), development of vocational training and the establishment of income-generating activities for women.

Navdanya: an organization close to the field

Since 2010, Navdanya⁸ has been a privileged partner of SOL in India. Founded by the ecofeminist activist Dr. Vandana Shiva in 1991, the trust promotes an agriculture that respects human rights and the environment, based on the autonomy of farmers and ensuring food security for the most marginalized rural populations (see box).

The projects conducted together by SOL and Navdanya have, over the past 10 years, contributed to the empowerment of Indian women farmers. For Vandana Shiva, "whether it is the pandemic or the call to regenerate the earth or to care for communities facing hunger, unemployment and poverty, women's experience and dedication to care will guide the ecological transition".







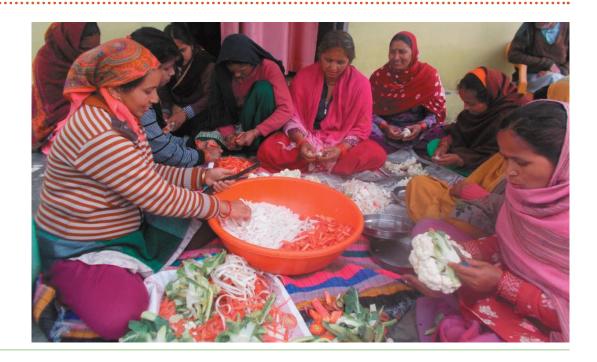


Navdanya: an organization close to the field

Involved in 22 Indian states, Navdanya works with many local and national organizations and involves about 1,000,000 small farmers, mostly women. It also works with local communities to encourage them to become involved in organic farming and seed saving activities. More than 35,000 farmers are part of its network, and 2,000 new farmers are trained each year.

Initiator of a hundred seed banks allowing the conservation of thousands of varieties of plants (rice, cereals, vegetables, oil seeds, medicinal plants), Navdanya created in 1995 in Dehradun (Uttarakhand, north of the country), Bija Vidyapeeth, a demonstration farm which hosts training courses. The farm also has a bank of 1,425 varieties of old vegetable and cereal seeds, a soil analysis laboratory, a food processing area, a greenhouse, a solar dryer, and a medicinal plant garden.

Navdanya has also launched the Diverse Women for Diversity program to give voice to women from the local to the global level on issues of biodiversity, cultural diversity, and food security. It provides a common international platform for women to lead non-violent resistance to globalization, genetic engineering, and patents on life.



Farmer agroecology in India: our actions since 2010

















1 farm to support training in agroecology equipped and reinforced with a processing unit, a solar dryer and a plant nursery



November 2019: Farmers Exchanges

Meeting between 100 farmers from France, Senegal and India

CREATED TOOLS

A board game to create a vegetable garden

An educational booklet on the good practices of the Green Schools project

3 posters on agroecology and farmer seeds

A comic on farmer agroecology in India, France and Senegal



To discover all the actions carried out in the framework of the 3 projects, visit sol-asso.fr



Awards:

The "Seeds of Hope" project was selected in 2016 by the French Ministry of the Environment as one of the «100 projects for the climate» and received in 2017 during the COP 23 the Gender and Climate Solutions Award⁹. It was finally presented at the 2nd International Symposium on Agroecology organized by the FAO in April 2018¹⁰, as an example of an initiative that values the fundamental role of women in the fight against climate change.



Testimonies:

Bija Devi's, seed keeper:

"If we buy seeds from outside, we don't know what they will do. All farmers should save their seeds. (...) This is the only way to make farmers prosperous, to ensure food security, for the health of all in our societies."



"I organize trainings on organic farming, and I help women to gather in groups for women's food sovereignty. We produce many different crops. We combine 4 to 5 crops per season in the same field, up to 12 crops per year on the same plot."

⁹ Read more about it: https://www.sol-asso.fr/cop23-mise-a-lhonneur-de-laction-des-femmes-pour-le-climat/

II. Women actresses of agroecological transition in India

1. WOMEN, FIRST CONCERNED BY AGROECOLOGY

In India, women living in rural areas are often confined to low-valued agricultural work (transplanting, weeding, etc.). Moreover, it is difficult for them to access land, credit, and training. Finally, their subsistence and that of their families, which they often ensure, is undermined by climate change, whose meteorological consequences expose them more directly to food insecurity and malnutrition. At the global level, the risk of death linked to natural disasters is 14 times higher for women, who also represent 90% of climate refugees¹¹. The ecological and farmer transition as conceived by SOL is part of the construction of more inclusive societies, which give women rights, opportunities, and responsibilities equivalent to those of men, and allow them to draw the same forms of recognition. It is estimated that equal access to land, natural and material resources would enable women to increase the yields of their farms by 20 to 30%¹², which would contribute to significantly reducing malnutrition in the world.



A lever of change for women and communities

For SOL and Navdanya, it is necessary to question the sexist patterns of conventional agriculture and to promote the emancipation of women from male control in India as elsewhere. On the contrary, women's involvement in the agroecological dynamic contributes to the development of this model, which is more respectful of biodiversity, environment, and human beings.

¹¹ Clotilde Bato et Audrey Boullot, « Donner le pouvoir aux femmes pour protéger la planète. » in Après la pluie – Horizons écoféministes, Edition Tana, october 2020.

¹² FAO, La situation mondiale de l'alimentation et de l'agriculture. Le rôle des femmes dans l'agriculture. Combler le fossé entre les hommes et les femmes pour soutenir le développement, 2010-2011.

¹³ Clotilde Bato et Audrey Boullot, « Donner le pouvoir aux femmes pour protéger la planète. » dans Après la pluie – Horizons écoféministes, Edition Tana, octobre 2020.

¹⁴ Final external evaluation of Seeds of Hope project, February 2019

This has been demonstrated in the projects that the partner organisations have been carrying out jointly for 10 years.

Following training in agroecological techniques (making pesticides and natural fertilizers, learning crop rotation techniques, using farmer seeds, etc.), 1248 farmers, 80% of whom are women, are now producing fruit and vegetables independently, and 80% of them have obtained an increase in their production of 5% to 20%. All the farmers have subsequently switched to organic farming and have seen a clear improvement in the quality of their soils and their health.

After three years, most farmers reported yields equal to those of farmers using chemicals for corn, rice, and wheat.

In the case of vegetables, their productivity under organic farming is even higher. Farmers reported that, despite unfavorable climatic conditions, productivity of the main food crops was satisfactory compared to conventional farms. Agroecology is thus a source of autonomy, resilience, and food sovereignty for farmers, especially women.

<u>Testimonies:</u> Kamlesh Devi, farmer in Keshowala:



"I participated in agroecology trainings at Navdanya's farm and in my village. I learned different techniques to make compost, save my seeds and increase soil health. Before we used chemical pesticides and fertilizers, now we don't. By applying the different techniques, our food is better, and our children are healthy."

Women farmers of Lower Charbha village:



"It is better for our health to grow our vegetables without chemicals, it is also cheaper, and our products taste better. For these reasons we asked to work with the project. Now we grow 10 to 12 different varieties of vegetables and plants each season, we save our seeds, and we hardly buy any from the market."

In India, the training in agroecological techniques conducted with women farmers has led to: An increase in agricultural production of 5 to 20% ¹⁶.

100% of farmers are fully convinced of the advantages of organic farming over chemical farming. They are particularly satisfied and happy with the savings in chemical input costs on the one hand, and the better and healthier agricultural production in the form of cereals and vegetables on the other¹⁷.

2. SEEDS, KNOWLEDGE, AND KNOW-HOW SPECIFIC TO WOMEN

India embarked more than 50 years ago on the industrialization of its agriculture. Industrial seeds then took precedence over the traditional seeds used by farmers for thousands of years, with the imposition of a standardized model for registering seed varieties used by farmers that met agribusiness criteria. In India, rice varieties declined from about 200,000 to 30,000 in the mid-19th century, and several thousand more varieties have disappeared since the imposition of the Green Revolution in India in the 1960s¹⁸.

Today, it is estimated that only 6,000 varieties of rice remain in Indian fields¹⁹. As a result, this has led to a collapse in crop biodiversity, greater vulnerability of crops, increased use of pesticides, standardization of fruits and vegetables and a decline in their quality.

In the face of these observations, the assets of farmer seeds are today reaffirmed. Offering a great genetic diversity, they adapt to many geoclimatic contexts. Free of rights and with excellent taste and nutritional qualities, they are the fundamental resource of farmers, who can save, reuse, and transmit them without purchase costs. Farmer and local seeds are the foundation of farmers' food sovereignty, quality food and agricultural production adapted to climate change.

In India, women have traditionally played a prominent role in the preservation and use of seeds. They are the holders of ancestral knowledge and skills in the selection, conservation, and multiplication of farmer seeds. A study conducted by Navdanya in 2010 revealed that in 60% of the cases, women decided on the type of seeds used on the farms²⁰. On a daily basis, Indian women farmers use 150 different plant species²¹.



¹⁸ Navdanya & RESTE, Seeds of Hope, Seeds of Resilience – How Biodiversity and Agroecology offer Solutions to Climate Change by Growing Living Carbon, 2017

¹⁹ Debal Deb, La lutte pour sauver le riz traditionnel indien, Pour la Science, 21 avril 2020.

²⁰ Vandana Shiva, Staying Alive: Women, Ecology and Survival in India, Navdanya, 2010.

A feminist agroecology for resilience

The programs deployed by SOL and Navdanya have strengthened this role in the covered territories by structuring a network of 274 seed keepers trained in seed selection and conservation. These women farmers are entrusted with local varieties of seeds to preserve, benefit from training specifically addressed to them and are the protagonists of the implementation of techniques learned during training in their farms or villages. They have identified and collected 30 varieties that are resilient to the climate changes affecting their regions (resistance to drought, flooding, etc.)²².

They select the seeds according to the climatic and geographical characteristics of their territory and then test their adaptability to the environment and their good yield, even under climatic stress. Varieties with satisfactory results are selected and then stored in the 17 seed banks that these programs have created or consolidated, as well as on their own farms.

Vegetable production in the area has become extremely diversified, increasing from an average of 3 or 4 varieties per family to more than 27²³, improving farmers' resilience to climate change. The work of the seed keepers thus has a multiple objective of restoring cultivated biodiversity, food and economic autonomy and resilience.

To cope with the severe floods, long dry spells and increasingly frequent cyclones in India, many local varieties have been selected and conserved. For example, crops such as millet and local rice varieties with long vertical roots, no lateral roots and less leaf curl have evolved to tolerate drought and ensure food security in water-scarce areas. The seed keepers in the Navdanya network have

also conserved salt-tolerant rice varieties such as Lunabakada, Kalambank, Bhundi, and Dhala sola, as well as more flood-tolerant varieties.

The solutions provided by traditional seeds make women experts thanks to their knowledge and know-how in seed selection, multiplication, and conservation.

These actions, while reinforcing a role traditionally assigned to women, have produced significant societal effects: strengthening the food security of women and their families and greater involvement of women in the management of natural resources and in decisions related to agricultural production.



²² Mandwa (éleusine), Jhangora (millet), Kauni (millet), Bhat noir et blanc, Kulath, gram noir (légumineuse), Chad Dhan (riz rouge), maïs, l'Amarante, Masoor (Lentilles), orge, lentilles Navrangi, riz Ukhdi Dhan, blé W-75 & RR-21, blé Mishri et blé Mundri, chana brown (pois chiche), Chana Black (pois chiches), Toor (légumineuse), moutarde, blé Kathia, coriandre, Zeera (cumin), Sonf (fenouil), etc.







Bija Devi, seed keeper

"Today, the food I produce is healthy and tasty and my family saves money. I save my own seeds like paddy basmati rice (non-irrigated), kasturi rice and vegetables like radish, spinach, fenugreek, mustard, garlic, onion, etc. I hope to continue exchanging knowledge and skills for the protection of our seeds and land."

"If we don't save our seeds, what will we eat tomorrow? For example, I just harvested turmeric, I'm going to save some in the ground, the smaller ones, which I will replant in July. I know that the turmeric I just harvested grows very well here, we have been growing it for many years, it is reliable."

IMPACTS:

Diversity of subsistence crops (rice, wheat, maize, mustard) increased by²⁴

10 à 15%

The diversity of grown vegetables and spices increased by²⁵

275%



Farms using agroecology and locally adapted seeds outperformed conventional farms, even under climate stress²⁶



3. WOMEN CONQUERING THEIR AUTONOMOMY

Industrial agriculture has made Indian farmers dependent on a model that imposes its own techniques, seeds, and commercial outlets. This model has not allowed them to ensure their self-subsistence, and generates negative impacts on food quality, natural resources, and ecosystems. Women are even more affected because they face inequalities that undermine their freedom to act: the conquest of their autonomy is therefore a priority issue. This implies equal access to productive resources (land, bank loans, etc.), support for the development of activities (agricultural, commercial) and their access to the income generated that promote their emancipation, as well as participation in debates and decisions concerning agricultural production or community life. The agroecological transition must allow these different issues to be addressed together, and to advance women's autonomy and gender equality.

In India, autonomy is gaining ground

Training women in agroecological techniques, promoting their expertise in preserving local biodiversity and enabling them to receive payment for their work, contributes to their recognition, their emancipation and the affirmation of their local democratic role.

The programs carried out by SOL and Navdanya in this sense have helped Indian women farmers to achieve real autonomy. The women beneficiaries have seen their basic income increase by 25%²⁷. The training of women farmers in agroecology, seed conservation and food processing has enabled them to become more self-sufficient in food and independent of the market, but also to sell their surpluses at fair prices, either locally or within the Navdanya fair trade network. This has a positive impact on the community's overall economy, as it strengthens the value chain for its women, who perform essential but poorly paid activities.

In addition, the 606 women members of the 38 self-help groups created during these 10 years have, thanks to the implementation of micro-savings systems, the development of projects and exchanges between peers, acquired new knowledge, exercised important responsibilities, learned to speak in public, etc.

These women now play a recognized role in agricultural activity and in the management of natural resources. They have better access to the means of production and enjoy a real capacity for initiative.

Participation in decision-making has also become more equal, in the agricultural field as well as in the family sphere and in local politics. These developments make women the instigators of profound changes in and for the community. These gains in autonomy place them at the heart of strategies to feed the world of tomorrow, but also to ensure better respect for human rights.







"We have a self-help group in the village, we meet every month. Firstly, it allows us to have a moment of sharing and to help each other when necessary. Secondly, the money we collect will allow us to give loans to each other and reduce our financial dependence. Finally, this group can be an opportunity to work together, and eventually start an income generating activity."





"I borrowed a small amount of money from the self-help group and was able to start renting a sales space. Now I sell my fruits and vegetables there every day. I can cover my expenses with the income generated and I even make a small profit. As a result of my experience, many women farmers in the village would like to start a small sales stall like mine."

IMPACTS:

Thanks to the techniques learned, the farmers have increased their production and are now self-sufficient for their family food.²⁹

The farmers who have surplus production have grouped together to create sales stalls in order to promote their products, sell them and share the profits.



Conclusion

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Recognition of the role and rights of women, a key issue in the agricultural and food transition

In order to grow and spread widely, the agricultural and food transition requires the participation of an ever-increasing number of actors, and to put farmers back at the heart of our agricultural and food systems. And if men and women have everything to gain from a parity approach to functions and responsibilities, it is urgent for SOL to promote the place of women within these systems, because of the key role they play.



An essential but little-known role

Women farmers, in India as elsewhere, have a central role in farming. Without them, many essential tasks could not be carried out in the same way on the farm. SOL and Navdanya projects have shown the importance of the role of women as guardians of local biodiversity, drivers of innovation for their farms and part of solidarity in their communities (initiating the transition to sustainable practices, sharing with other women in their communities, etc.). By joining together in self-help groups, they are implementing collective solutions at the village level and regaining their economic and decision-making autonomy. The agroecological transition must now highlight these multiple roles by building on their traditional knowledge and know-how in order to strengthen food security and the resilience of farmer communities.



Concrete and promising results

Understanding the importance of farmers' seeds, women have strengthened their autonomy by selecting, conserving, and promoting them. Thanks to their commitment, all the farmers in these villages now cultivate a much wider range of varieties of cereals, spices, fruits, vegetables, without chemical inputs and with very good yields. And all of them are now collecting seeds that will be planted the following year, thus regaining their independence.



A holistic approach that promotes overall wellness

Agroecology and feminism should not be dissociated, both movements promote a more democratic, inclusive and resilient model of society. These movements are intended to allow collegial decision making where women have their place, to stimulate and facilitate individual initiatives, to correct injustices, to place the environment at the heart of the issues. Agroecology and feminism ultimately contribute to a more equitable vision of society and human relationships, and a reconnection of humans to nature. The agroecological transition will not be exclusively feminine, but the role and place that women will play - and already play - will be decisive. SOL will continue its efforts to disseminate this vision more widely and deploy its actions.



10 years of actions with Indian farmers

The programs that SOL and Navdanya have been experimenting in the field for the past 10 years have produced encouraging results that support their vision of the agroecological transition and encourage them to extend and intensify their action. Therefore, the two associations launched at the end of 2020 their new program Seeds of Resilience, for 3 years, in the states of West Bengal, Rajasthan and Uttarakhand. Stimulated by the increased need for resilience in the face of climatic, health and socio-economic crises that aggravate the difficulties of farmers, and in the continuity of previous projects, it relies on agroecology, the preservation and multiplication of farmer seeds to ensure the food security of farmer communities, recreate the consumers-farmers link, and build sustainable local agricultural and food systems.

IMPACTS:

SEEDS OF RESILIENCE PROJECT
DIRECTLY ADDRESSES

700 FARMERS

IN 60 VILLAGES.

IT WILL ALSO RAISE AWARENESS AMONG

16 000 PEOPLE,

INCLUDING 1 000 CHILDREN IN 10 SCHOOLS.



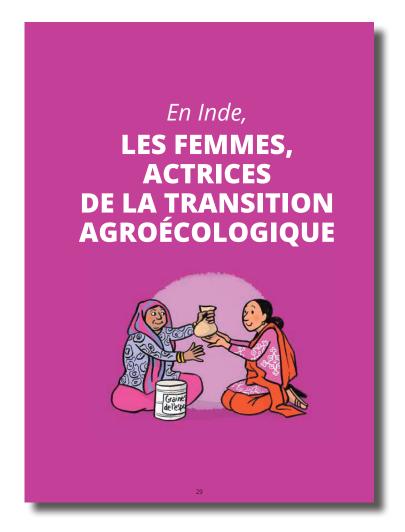
Appendix

Extract from the comic strip «Toutes paysannes, tous paysans: voyage au cœur de l'agroécologie paysanne» (All women farmers, all farmers: a journey in the heart of farmer agroecology) - In India, women actors of the agroecological transition, p.29 to 48.

Inspired by the life stories of farmers in the Small Farms International program, this comic book illustrated by Claire Robert takes you on a journey to India, France and Senegal, to discover the challenges of an agroecological transition based on farmer autonomy and the preservation of seeds by the farmers.

Discover the whole comic book by scanning the QR code:





























On the occasion of the 10th anniversary of partnership between SOL and Navdanya, one of our local partner in India, we invite you to discover our new publication dedicated to the crucial role of women farmers in Indian agriculture: "Women actresses of the agroecological transition". By retracing our 10 years of projects in India, this publication highlights the role of Indian women in the country's agroecological transition.

In this publication, SOL shares its experience in India with Navdanya as well as the lessons, reflections, and new knowledge on the role of women in the evolution of agricultural practices - all good practices that we value in our current projects and are keen to share. In these pages, we will focus on the agroecological transition, the selection and use of seeds adapted to the territories of intervention in a context of climate change, and finally the central issue of women's empowerment.

We hope that this publication will enrich the reflection on the place of women in the evolution of agricultural practices but also in the resilience to climate change and to participate in the recognition and valuation of the agricultural work of Indian women.



SOL, Alternatives Agroécologiques et Solidaires Tel. +33 (0)1 48 78 33 26 Mail. contact@sol-asso.fr www.sol-asso.fr

Adresses:

Siège:

20 rue de Rochechouart 75009 Paris

Antennes:

1 rue Jouxt-Aigues 31000 Toulouse

&

Chez 21 PAYSANS, 2 Rue Valperga 06000 Nice



@SOLassociation



@SOL_association



@SOLassociation



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