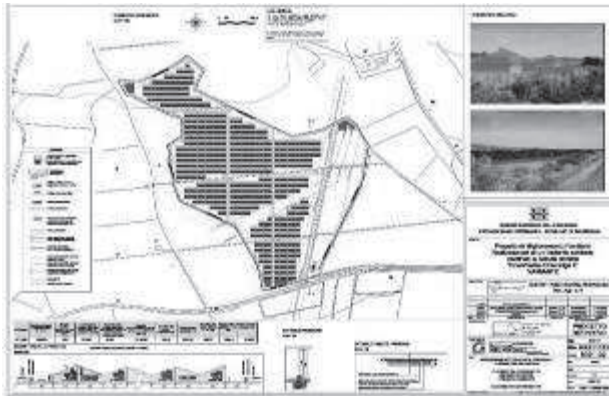


Land concentration and green grabs in Italy:

The case of Furtovoltaico in Sardinia

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Plan of solar greenhouse plant



Meeting of the 'S'Arrieddu for Narbolia' Committee, 14 October 2012

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1. Introduction – Green grabbing: the case of Narbolia

The intertwining of climate change, environmental and economic crises and food price volatility and spikes raises serious concerns about the widespread model of agricultural production widespread in the North. It suggests the urgent need for a more sustainable, decentralised and locally based farming system that is capable of addressing current risks and challenges. This means a focus on reducing carbon emissions, shortening food miles, enhancing local food-production systems and improving access to land and the right of existing and future small-scale farmers and family farms to cultivate it.

The value of agricultural land is changing in Europe, in particular in Italy, leading to increased land concentration as ever more agricultural land is coming under the control of a small number of large-scale farms or companies. The value of agricultural land is becoming de-linked from its actual agricultural use: financial capital is speculating on land for business purposes, mainly to grab the value of agricultural rent, but also its environmental value (through carbon sequestration mechanisms, as well as the production of ‘renewable energy’) and the value of natural resources associated with the land, in particular water and biodiversity.

In such a process, land use is shifting further towards an extractive model, and away from the family farms that could provide the basis for more sustainable and localised agrarian systems. Extractive agriculture relies on the exploitation of resources, regardless of their need to regenerate themselves, on monoculture and high levels of energy consumption. It alienates people from the countryside and concentrates wealth outside the area through practices that oscillate between the free market and protectionism, which are an inherent part of how the dominant economic model functions.

The trend towards land concentration exposes the crucial limitations of various mainstream policies, in particular:

- **Agricultural policy** that favours larger farms or corporate units and an extractive model of agriculture rather than small-scale producers and agro-ecological methods. Both European and national legislation in Italy have supported the capitalisation and industrialisation of agricultural production processes, thus encouraging capital-intensive, large-scale agro-industry.
- **Land policy** that prioritises the ‘right of possession’ over the ‘right to produce’ and the ‘right to cultivate’. Access to land for young people and smallholders does not necessarily have to be secured through ownership: the sale and purchase of land can co-exist with a set of regulations aimed at promoting and protecting the agricultural use of land rather than its possession.
- **Energy policy**, with incentives for the ‘agri-production of renewable energy’ is reinforcing the two main trends in agricultural and land policies, both at the European and at the national level.

These combined policies form the main means for obtaining control over the right to produce, not the inescapable decline of the agricultural sector. In addition to fostering the impoverishment of natural resources and the land, this process is having a dramatic impact on the whole food-production system.

To illustrate these concerns, this chapter presents a case of land grabbing in the name of environmental protection via the promotion of ‘renewable energy’ in the Italian region of Sardinia.

The case concerns an Enervitabio Ltd project in the municipality of Narbolia in Oristano province. A solar greenhouse plant for agricultural production was built, with an energy production target of 27 megawatts (MW). The plant is a relevant example of a trend whereby hundreds of hectares of prime farmland are being used for solar greenhouse projects that have various negative impacts: not only are they undermining the rights of local communities to produce food and secure access to land, but

also they are skirting the law and eroding the capacity of small farmers to contribute to resolving the crisis affecting Italy. Moreover, such projects have been capturing financial resources intended for the agricultural sector.

While there has been significant attention devoted to land grabbing in the South, the same phenomenon is also affecting small farmers in the North. There is a need to maintain a vigorous commitment and engagement in resisting this process. This is not about making occasional complaints or conducting an isolated campaign. This chapter will stress the urgent need to support the long-term processes needed to return the land those who work it.

Defending land for agricultural use is the basis of solidarity, since land is a vital resource for all human life and provides the means through which present and future generations can access water and enjoy a safe, prosperous and biodiverse natural environment. For this reason, we should react to every portion of land that is captured, wherever it might be, as if it was robbing something from everyone: this is not about romantic ruralism or altruism, but about self-interest. Everyone is entitled to a future that is worth living, which cannot be surrendered. The destructive use of the land denies everyone this future.

The reduction of cultivated land, involving millions of hectares being used for an array of non-agricultural uses (such as residential, industrial, military, commercial and tourism activities, infrastructure and the production of renewable energy) must be a priority issue for each and every person. Solutions are within reach as long as everyone accepts the responsibility to question, understand and engage.

This chapter focuses first on various levels of land and agricultural policies, and the resulting land-grabbing practices. The first section constitutes an overview of the global land-grabbing phenomenon and the trends towards the shifting value and use of land, and the dynamics of shrinking access to land and land concentration. The second section explores the Italian dimensions of such trends, highlighting that those who lose out from the concentration and capitalisation of agriculture are those who, despite policy constraints, most contribute to addressing major crises, providing food sovereignty and rural employment and also reducing carbon emissions. Finally, the paper turns to the regional level, focusing on patterns of land property and the agricultural situation, including in relation to the global food system, and the promotion of a 'renewable energy' project in Sardinia by both the central and local government.

The next section examines the case study of the Municipality of Narbolia, the location of a mega-solar greenhouse development being undertaken by Enervitabio Ltd, and the local community's opposition to the project, its struggles and resistance.

The concluding section summarises insights from the Narbolia experience, draws out lessons in relation to the broader trends and concerns identified in the introduction, and presents various policy recommendations needed to shape the necessary changes.

2. Land and agricultural policy: common trends at the international, European and national level

A. The international context

I. A global land grab

The term 'land grabbing' entered the international stage in the context of converging economic, financial, energy and food crises between 2007 and 2008. At the time, the media spotlight was focused primarily on emerging and relatively new players such as Saudi Arabia and South Korea, which were becoming

involved in potential large-scale land acquisitions in countries in the South, for the purpose of producing food crops. What is now clear is that framing the issue in this way overlooked, if not neglected, key drivers and power dynamics and relations underlying and supporting land grabs.

Our understanding of what constitutes a land grab in the contemporary context is based on Borras et al. (2012), namely the three interlinked specificities of contemporary land grabs: land grabbing as controlling resources; land grabbing involving large-scale transactions, in terms of the scale of acquisition and/or of the capital involved; and land grabbing as a response to the convergence of multiple crises – food, energy/fuel, climate change, economic and financial, as well as the growing need for resources by BRICS (Brazil, Russia, India, China, South Africa) and middle-income countries (MICs).

Land grabs therefore need to be placed ‘in the context of the power of national and transnational capital and their desire for profit, which overrides existing meanings, uses and systems of management of the land that are rooted in local communities. The global land grab is therefore an epitome of an ongoing and accelerating change in the meaning and use of the land and its associated resources (like water) from small-scale, labour-intensive uses like subsistence agriculture, toward large-scale, capital-intensive, resource-depleting uses such as industrial monocultures, raw material extraction, and large-scale hydropower generation – integrated into a growing infrastructure that link extractive frontiers to metropolitan areas and foreign markets’ (TNI 2013).

This chapter argues that **agricultural land in Europe**, as in many other countries across the globe, has become object of financial speculation as the value of land is moving away from its current agricultural use. Financial capital speculates on land, mainly to obtain the value of agricultural rent, but also its environmental value, through allegedly sustainable practices such as carbon-sequestration mechanisms and renewable energy production, along with the value of natural resources inherent in the land, primarily water and biodiversity. The rapid growth in the demand for land is largely due to the large-scale acquisition of resources and land by mining and construction industries, and to the growing agro-industrial demand for flex-crop plantations – all of which contribute to land speculation.

II. Shrinking access to land and land concentration

Evolving patterns in land use and land property highlight two concurrent trends, both at the European and at the national level in Italy: shrinking access to land, especially for smallholders, and increasing land concentration, especially in the hands of businesses that are becoming more interested in obtaining agricultural land. These trends are shown in Table 1 and Figure 1.

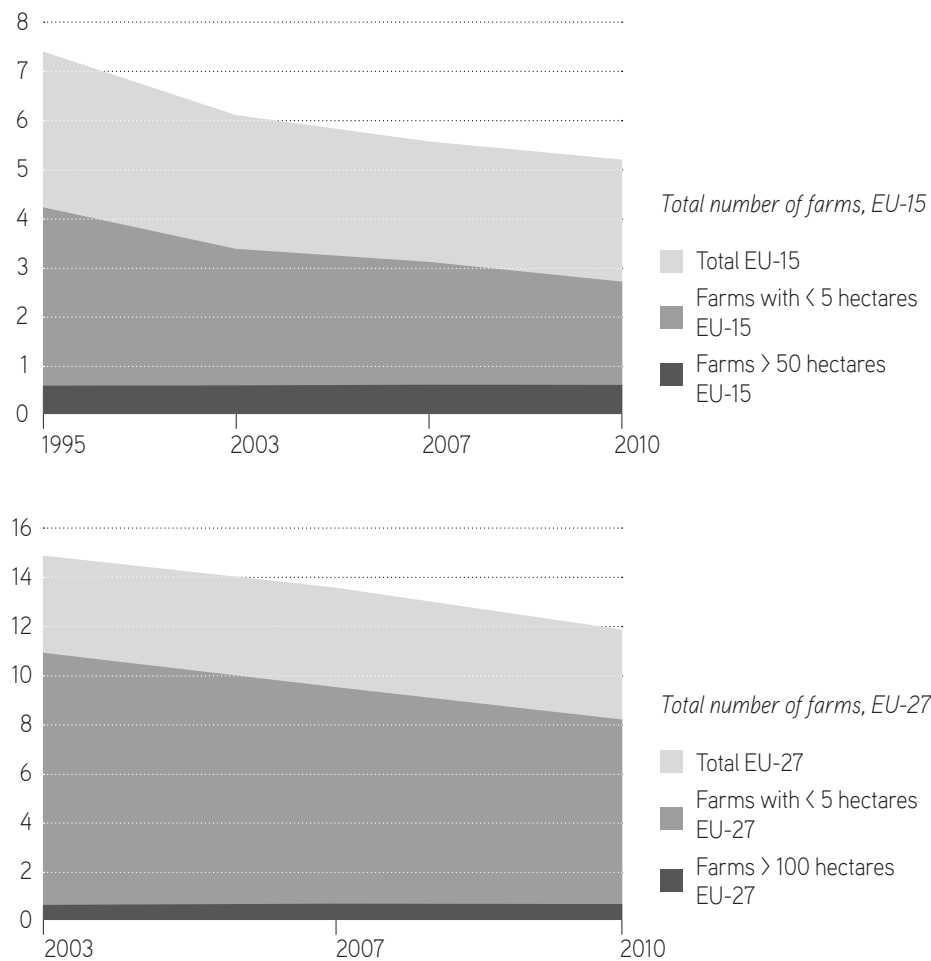
Table 1. *Total number of farms in the European Union 1995–2010*

Date	Total number of farms	Farms with < 5 hectares	Farms with > 50 hectares
1995 (EU 15)	7,370,000	4,193,590	585,730
2007 (EU 15)	5,662,420	3,087,070	616,920
2010 (EU 15)	5,225,340	2,784,800	610,070
2003 (EU 27)	15,021,030	10,959,000	688,420
2007 (EU 27)	13,700,400	9,644,000	698,000
2010 (EU 27)	12,014,800	8,314,150	716,490

As shown in Table 1, in 1995 the EU-15 had 7.4 million farms, which had dropped to 5.7 million by 2007; in 2003 the new EU-27 had 15 million farms, which had dropped to 13 million in 2007. In 1995 EU-15 there were 4 million farms with less than 5 ha and by 2007 there were 3 million. The EU-27 had 11 million farms in 2003 and less than 10 million in 2007. In total, this implies a loss of more than 70% of the total number of EU farms. The EU-27 accounted for approximately 12 million farms and 170 million ha of Used Agricultural Area (UAA).

In 1995 there were 585,730 farms of over 50 ha were (EU-15), and 2007 saw an increase to 616,920. When taking into consideration EU-27 data of 2003, there were 688,420 large farms, which went up to 716,490 in 2010.

Figure 1. Total number of farms in the European Union 1995–2010



Source: EUROSTAT, 2013

There are many actors involved in such acquisitions, which can be classified under different legal categories and business interests. Some of the main corporations involved include Allianz RCM Global Agricultural Trends, Baring Global Agriculture Fund (Crédit Agricole and Société Générale – France) and Robeco Agribusiness Equities D EUR (Rabobank – the Netherlands).

B. The national context

I. Land concentration in Italy

Shrinking access to land at the global and European level has been mirrored by similar difficulties for Italian farmers. National policies have exacerbated the situation by allowing the rush to privatise the common or public lands still available, which are regarded as underused.

Italy is encouraging the creation of new farms through the sale of public lands that either formally belong to the state or are collectively managed by Municipalities or Local Authorities, which represent a large part of the availability of UAA.

Table 2. *Used Agricultural Area in Italy (in ha)*

Administrations or public authorities	269,375.50
Institutions or Municipalities that manages collective properties	445,123.65
Total	714,500

Source: ISTAT, 2011

Table 3. *Total Agricultural Area (TAA) in Italy (in ha)*

Administrations or public authorities	852,643.99
Institutions or Municipalities that manage collective properties	1,103,090.72
Total	1,955,735

Source: ISTAT, 2011

In addition to the data shown in Tables 2 and 3 above, Italy's UAA of 714,500 ha coincides with 1,955,735 ha of TAA, divided into more than 2,600 farms. Over 1 million ha come under a communal or common property category. These lands belong to the citizens, which makes them inalienable. The only role of the Municipalities is to manage them to protect citizens' collective rights over land.

Currently, Italy's agricultural land is characterised by a concentration of property, whereby 22,000 farms with more than 100 ha own more than 6.5 million ha of TAA. Aside from the public lands, the remaining 4.5 million ha are concentrated in the hands of 19,000 private companies or farms, each possessing more than 100 ha. Between 2000 and 2010, these companies increased the cultivated surface by 8% and strengthened their absolute number by 16%.

Table 4. *Farms in Italy of below 100,00 hectares*

Years	% of total	
	Farms	TAA
1948	0.22	25.8
1980	0.69	36
1990	0.72	36.8
2000	0.52	29
2010	0.95	29.8

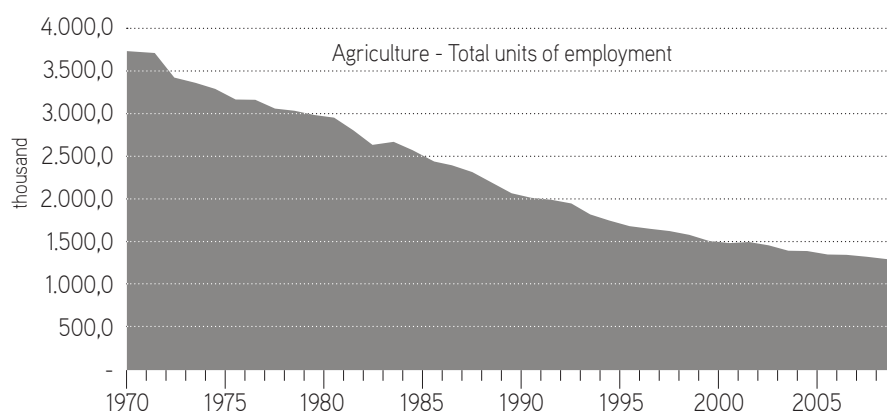
Source: ISTAT, 2011

Over the past 60 years, the Italian agricultural system has undergone a profound transformation. The so-called Italian Agrarian Reform, passed on 21 October 1950, law no. 841, was slightly more than a land reform. It was implemented at a time when farms of less than 2 ha represented 83% of the total of 17.4% of the land being farmed. At that time, only 0.22% of farms were larger than 100 ha, approximately 26% of TAA. Table 4 below shows evolving trends regarding the larger farms (ISTAT, 2011).

Large farms with **more than 100 ha** not only experienced a continuous growth in number, but also a 10% increase in the amount land in 40 years. On the threshold of 2000s they had access to almost 30% of the TAA. Such trends contradict the benefits that the agrarian reform should – and could – have brought by reinforcing the process of agricultural land concentration taking place in the country. Just over half (51%) of farms were of less than 2 ha in 1961 and controlled the 7.2% of the TAA. By 2000 they represented 57%, controlling only 6% of the TAA (ISTAT, 2011).

What emerges from an intersection of Figure 2 with Table 5, representing employment trends in the agricultural sector between 1970 and 2008, is that land concentration did not create jobs at the national level.

Figure 2. *Employment trends in Italy's agricultural sector*



Source: ISTAT, 2011

As shown in Table 5, between 2000 and 2010 there was a reduction of 31.6%, while working days decreased only by 24.8%. This means that those who continued to work on the family farm did more work although there were fewer of them: **self-exploitation by family members** in family farming increased.

Table 5. *Farm labour and workdays in Italy*

Farm labour categories	No. of people 2010	No. of people 2000	Absolute variations	Variations %
Holder	1,067,535	1,664,404	-596,869	-35.9
Spouse working on the farm	484,067	718,828	-234,761	-32.7
Other family members working on the farm	277,336	431,823	-154,487	-35.8
Relatives working on the farm	145,949	179,047	-33,098	-18.5
Family labour	1,974,887	2,994,102	-1,019,215	-34.0
Other labour	540,055	683,897	-143,842	-21.0
Total farm labour	2,514,942	3,677,999	-1,163,057	-31.6

Farm labour categories	Working days 2010	Working days 2000	Absolute variations	Variations %
Holder	94,562,603	125,277,639	-30,715,036	-24.5
Spouse working on the farm	23,751,754	38,563,848	-14,812,094	-38.4
Other family members working on the farm	18,617,301	28,983,097	-10,365,796	-35.8
Relatives working on the farm	8,292,870	11,087,988	-2,795,118	-25.2
Family labour	145,224,528	203,912,572	-58,688,044	-28.8
Other labour	32,797,380	32,777,552	19,828	0.1
Total farm labour	178,021,908	236,690,124	-58,668,216	-24.8

Source: ISTAT, 2011

II. The impacts of land concentration

Since the 1990s, it has become virtually impossible for small farmers to obtain access to land in Italy. Evictions are rising, with a massive reduction in the number of farms and agricultural workers. The situation is dangerously close to impoverishing all dimensions of production, including human and natural resources, threatening to alter dramatically not only the agricultural landscape but also the whole way of producing food.

This trend is fostered by a **high concentration of agricultural land** in the hands of a small number of farms. Over the last ten years, the process of land concentration in Italy escalated sharply: the top percentile controls one third of total agricultural land. At the end of World War II, farms with over 100 ha represented 0.22% of the total number although they controlled 25% of the country's agricultural. Now, about 22,000 farms control over 6.5 million ha, and the last decade has seen a fall in the number of companies holding less than 20 ha (ISTAT, 2011).

Table 6. *Number of farms in Italy 2000–2010*

UAA (ha)	Farm number		Absolute variation	Variation %
	2010	2000		
Without HA	6,130	3,412	2,718	79.7
Less than 1,00	504,609	1,012,806	-508,197	-50.2
1,00 - 1,99	326,078	462,558	-136,480	-29.5
2,00 - 4,99	356,366	459,988	-103,622	-22.5
5,00 - 9,99	185,323	218,008	-32,685	-15.0
10,00 - 19,99	119,737	129,234	-9,497	-7.4
20,00 - 29,99	46,594	46,219	375	0.8
30,00 - 49,99	40,853	36,688	4,165	11.4
50,00 - 99,99	29,221	23,944	5,277	22.0
100,00 and more	15,509	12,596	2,913	23.1
Total	1,630,420	2,405,453	-775,033	-32.2

Source: ISTAT, 2011

Between 2000 and 2010, more than 700,000 farms of below 30 ha disappeared. Larger farms have increased both in absolute terms and in terms of their agricultural area. In particular those that have a UAA of more than 100 ha have increased in number by 23% and in area by 8.9%: today there are 15,000

farms with a size of more than 100 ha controlling roughly 3.5 million ha (26.6% of the total), while 1.5 million small-scale farms, with less than 30 ha (equal to 94.7% of farms), control less than 6 million ha (46.6% of cultivated land). Despite the process of modernisation, capitalisation and financialisation led both by the Common Agricultural Policy (CAP) and national policies, small-scale family farms remain dominant and indeed their number grew by 15% between 1950 and 1990, while those employing workers decreased by 2.5%. Furthermore, while TAA under small-scale farms rose by 20% over the same period, these farms lost control of over 5% of land (ISTAT, 2011).

What emerges is that family farming, conventionally defined as controlling an agricultural area of less than 20 ha, is the driving force of Italian agricultural food production. The myth of the large-scale capital-intensive agro-industrial farm thus collapses, along with the idea that it is bound to triumph over the backwardness of small-scale farming. A deep investigation of sole-holder farming, in order to identify its strengths and recent expansion, becomes a key part of the analysis.

In order to be productive, farms need access to certain basic elements for their survival: principally land, water and labour. In capital-intensive farms, exemplified in the infamous 'farms without land' (meaning pigs, chickens and cattle fed with industrial feed and confined to barns and sheds), capital is by definition pivotal to economic viability. Financial, economic and technical capital can either be generated within or outside the industry. Material resources can be derived from private investment or public expenditure, mainly the CAP.

Regardless of its vital role in providing employment, securing food sovereignty and offering viable alternatives in a context of global economic and environmental crises, governments continue to underestimate small-scale agriculture: most policies are designed and implemented on the basis of viewing the agricultural sector as a burden rather than understanding the potential of small-scale farming, especially in terms of economic growth, social development and employment. Furthermore, public policies tend to be based on the assumption that reducing the number of farms would achieve more efficient agricultural activities. The CAP subsidies are a case in point. In 2011, 0.29% of farms obtained 18% of total CAP subsidies to Italy, and 0.0001% (150 farms) obtained 6% of them. The remaining 93.7% farms received 39.5% of the subsidies (EUROSTAT, 2013).

Hence we argue that the key issue is access to the land required for new farming start-ups, especially those managed by young people, together with supporting small-scale farming.

C. The regional context: Sardinia

I. An overview of the land situation

In 2010, Sardinia had 58,447 smallholder farms of a total of 60,610. Such figure represents a 44.9% decline since 2000, when there were 106,012 individual farms. In 2010 agriculture covered 1,151,000 ha of Sardinia's UAA, an increase of 13% compared to 2000. At the same time, in terms of TAA, over 131,000 ha were lost, with a drop of 8.2% (ISTAT, 2011).

It is also worthy of note that capital-intensive farms employing wage labour lost 71% of TAA and 42% of UAA between 2000 and 2010, while **smallholders** lost only 0.5% of TAA and **increased their UAA by 12%**. Shrinking land availability had critical effects on the productivity of family farming. Despite the harsh global economic and financial crises, and although the number of individual and family farms declined between 2000 and 2010, UAA figures show that these farmers opted to maximise their land use. This strategy shielded smallholders and family farms from the changing agricultural and economic context and enabled them to adopt mechanisms to resist the global crises. Once again, smallholders concentrated their efforts and reviewed their energy consumption and machinery use in order to protect

their ability to work and produce even in the face of a major economic and productive crisis. Small-scale agriculture appears, then, both to be a sound choice in terms of agro-ecological sustainability and the best model of agricultural production from the perspective of economic efficiency.

Not only are capital-intensive farms less efficient in economic terms, but they also deepen the perverse mechanisms triggered by the crisis by cutting back on labour and relying on CAP subsidies. Furthermore, they often cede their land to farmers to use as pasture, receiving an informal rental payment for this and so increasing their incomes.

Regarding the legal nature of land ownership, the number of companies doubled between 2000 and 2010, going from 757 to 1,512, while the number of corporations managing farms tripled within the same period, from 49 to 126. While the latter is a modest figure, it is a part of a global trend. For a small island that does not have much fertile land, the phenomenon could potentially generate conflicts regarding access to agricultural land.

Table 7. Total UAA by farm types in Sardinia

Farm type	2010	2000	Variation	Variation %
Sole holder	1,006,231.60	893,109.09	113,122.51	12.7%
Wage labourer	71,041.27	124,159.95	- 53,118.68	- 42.8%
Other	74,547.34	2,688.77	71,858.57	?
Total	1,151,820.21	1,019,957.81	131,862.40	12.9%

Source: ISTAT, 2011

II. Regional agricultural production and trade

In recent decades, Sardinia has been experiencing an evolution in farming systems and a reduction in all types of cultivation except for horticulture, which saw an increase of 10% (see Table 8).

There are three main reasons to justify this positive yet contradictory trend. First, horticulture is labour-intensive, therefore does not require high levels of capital in order to provide for good yields. Second, each season lasts for only three months, thus allowing four yields per year, also in a small surface. Third, it benefits from a dynamic domestic market, which is its only way to prosper since there are only limited CAP subsidies for horticulture.

Table 8. Agricultural production in Sardinia

Production	Farms				Concerned area			
	2010	2000	Variation	%	2010	2000	Variation	%
Cereals	10,769	18,996	-8,227	-43.3	104.453,64	146,009.63	-41,555.99	-28.5
Horticulture	5,372	13,017	-7,645	-58.7	14.749,71	13,460.71	1,289.00	9.6
Grapes	18,300	41,721	-23,421	-56.1	18.839,68	26,301.44	-7,461.76	-28.4
Olive trees	31,103	49,699	-18,596	-37.4	36.467,63	39,945.49	-3,477.86	-8.7
Citrus trees	4,938	13,306	-8,368	-62.9	4.089,18	5,797.80	-1,708.62	-29.5
Fruits	6,224	21,260	-15,036	-70.7	4.859,54	8,982.64	-4,123.10	-45.9
UAA	60,138	106,789	-46,651	-43.7	1,151,820,21	1,019,957.81	131,862.40	12.9

Source: ISTAT, 2011

The linkage between regional agricultural production and international trade gives strategic insights into the strengths and weaknesses of Sardinian agricultural and food systems against the complex global context created by the crises. It is vital to point out Sardinia's degree of food dependence, primarily because of its impact on food sovereignty and regional agricultural systems. The economic value of agriculture in Sardinia is summarised in Table 9.

Table 9. *Economic value of Sardinia's agriculture 1980–2011 (in thousands of Euros)*

	1980	1990	2000	2005	2010	2011
Agricultural cultivation	250,421	405,665	625,869	669,033	641,595	656,059
Livestock	236,775	471,907	670,381	686,117	683,622	700,887
Agricultural support activities	78,411	135,422	185,490	206,323	249,340	262,124
Agricultural goods and services	565,607	1,012,994	1,481,741	1,561,473	1,574,557	1,619,070
Silviculture goods and services	6,101	7,250	24,556	19,660	29,428	25,835
Total	1,137,315	2,033,238	2,988,037	3,142,606	3,151,542	3,263,975

Source: ISTAT, 2011

The value of **exports** from the primary production sector remained stable between 1998 and 2011, while **imports** increased by 22% during the same period. In 1998, the value of exports exceeded that of imports by slightly more than 3% and by 2.6% in 2011: in other words, an insignificant share, with a negative balance of more than €167 million.

A closer look at the last few years shows a breakdown of agricultural products and food products exports, in particular processed and preserved fruit and vegetables: in 2011, there was a six-fold negative balance between imports and exports.

Table 10. *Sardinia's commercial trade in value, product area and country 2006–2011*

COUNTRIES	IMP2006	IMP2007	IMP2008	IMP2009	IMP2009	IMP2010
WORLD	5,647,428	7,242,603	5,257,035	7,094,990	6,634,835	6,656,175
	EXP2006	EXP2007	EXP2008	EXP2009	EXP2010	EXP2011
	146,869	159,096	352,406	302,061	454,883	1,462,941
Year	2006	2007	2008	2009	2010	2011

Source: ISTAT, 2011

III. Solar energy promotion and Italian law

The Ministry of Industry issued a decree on 5 August 2005 providing a legal framework for the feed-in tariff system, known as '*Conto Energia*'. In July 2011, a new incentive system for photovoltaic (PV) energy became law, coming into effect from 27 August of the same year.

80 The most important change for the feed-in tariff scheme, which was bitterly criticised by several farmers' organisations, was that systems above 12 kilowatts peak (kWp) would have to be registered

in order to obtain the incentives. The register allocates priority on the basis of the criteria specified in the decree, in the following order: systems installed in place of asbestos roofs; systems installed on energetically upgraded buildings; systems installed with components manufactured entirely in countries in the EU or European Economic Area (EEA); systems installed on contaminated sites owned by the armed forces or exhausted dumps and mines; systems installed with power of no greater than 200 kW serving productive activities; and systems installed (in descending order) on greenhouses, pergolas, canopies, cantilevered roofing and acoustic barriers.

The decree appeared to allow large companies to find ways to obtain the incentives, but with hasty mechanisms and with firms not being able to follow the deadlines imposed by the Ministry. For these reasons, in Narbolia the Municipality issued permits mainly on the basis of self-certification and regardless of detailed plans of the agricultural activities in question.

According to the Regional Government Resolution n. 27/16, 1 June 2011, in order for solar-powered greenhouses to be recognised as having an agricultural nature they must meet three specific requirements.

- The recognition of the **status of 'farmer'** as the entrepreneur
- **Adequate agricultural capacity**
- A **minimum illumination level** of 75% inside the greenhouse

In addition, as required by a joint Decree by the Ministries of Environment and Economic Development issued on 5 May 2010, in order to obtain incentives for solar energy, greenhouses should have a maximum of 50% coverage of solar panels.

Moreover, agricultural capacity, which must be established for plants with a capacity exceeding 20 kW, must be set out in a document including agronomic reports, agricultural incomes as at 31 December of the year preceding the submission of the application (in the case of existing activities); the gross agricultural income related to the duration of solar greenhouses (Bill of Revenue Agency no. 32/E, 6 June 2009); the income estimate to derive from photovoltaic (PV) energy production; the production potential of crops in greenhouses; marketing of agricultural and energy production; an investment plan illustrating prospective employment, costs and revenues, as well as demonstrating that the agricultural income will at least equal revenues deriving from energy production.

3. Narbolia's *Furtovoltaico*

A. The Municipality of Narbolia: a key site of mega-solar greenhouse development

According to the Municipality's website, 'Narbolia is a small town of about 1,800 inhabitants, situated at the foot of Montiferru, 57 m above sea level and 18 km from Oristano. Although not very large, its land surface of nearly 4,000 ha has an extremely varied landscape and environment, ranging from volcanic rocks of Monte Rassu, the flat region of Cadreas bordering the plain of Campidano, up to the sea where there is the famous pine forest of Is Arenas, as well as a beautiful beach. Narbolia has some of the most beautiful natural sites in Sardinia. The soil is fertile because it is both sheltered from cold winds and has sufficient irrigation, which enables the region to produce citrus fruits, grains and vegetables; the climate is also excellent for the cultivation of olive trees and vineyards. An area rich in history, it has many interesting archaeological sites' (authors' translation).!

The Municipality of Narbolia provides information about agricultural activities and its rich natural and environmental endowments but makes no mention of the mega-solar greenhouse plant for agricultural production located in the same area. This system is the largest in Italy and has a production target of 27 megawatts (mW): the 64 ha plant comprises 107,000 installed panels, 1,614 greenhouse sections of 200 m² each, supported by 33,000 concrete pillars knocked into the area's most abundantly irrigated soil.²

For this project, the company should receive over €7 million in incentives every year for 20 years, and another €3.5 million a year for the same period from selling energy to the national grid (ENEL). Agricultural land, previously held by individual farmers to grow crops and provide pasture, was valued at about 12,000–15,000 € per hectare. Enervitabio Ltd for paid 40,000 € per hectare, respecting the legal rights of neighbouring farms.³

Regarding land distribution in Narbolia and Milis Municipalities, the period between 2000 and 2010 is quite telling (see Table 11). In 2000 11.7% of the UAA in Narbolia was cultivated by farms ranging from 3h to 20 ha. Ten years later, these farms controlled 11.2% of UAA. On the other hand, farms of more than 100 ha controlled 34.3% of UAA in 2000, growing to 40.1% in 2010.

Table 11. *Milis and Narbolia Municipalities, farm size in ha*

	Milis		Narbolia	
	2000	2010	2000	2010
3-4.99	3	2.3	2	1.7
5-9.99	5.7	10.2	2.6	2.8
0-19.99	8.8	15.2	7.1	6.7
>100	33.2	34.3	33	40.1

Source: ISTAT, 2011

The process of land concentration in holdings of more than 100 ha, has absorbed larger farms, as shown in Table 12..

Table 12. *Milis and Narbolia Municipalities, number of farms between 50 ha and 99.99 ha*

Year	Milis		Narbolia	
	2000	2010	2000	2010
Number of farms	141	577	655	477

Source: ISTAT, 2011

Farms of between 50 ha and 99.99 ha quadrupled in Milis, but declined by 27% in Narbolia. Precisely because of limited agricultural land in Milis and Narbolia, and the concentrated ownership of fertile land, even a very small reduction in land availability has far-reaching implications for the municipalities' entire agricultural and, ultimately, on their ability to produce food and to provide employment opportunities across the island.

Narbolia is not the only centre of interest for so-called renewable energy projects. The series of approved and registered plants listed in the GSE register to obtain incentives or subsidies (as of September 2011, but evolving) include 22 companies involved in PV energy production in Sardinia with a foreseen output of more than 1,000 kilowatts (kW).

82 The Sardinian judicial authorities are currently conducting enquiries and evaluations of a number of projects concerning solar greenhouses, which already cover hundreds of hectares of farmland.

A total of 39 requests from 22 companies for access to the 'manager for energy', the GSE, which is the source of subsidies for 'agricultural' companies, were accepted. According to the European directive, as implemented through national legal provisions by the Italian Minister of Agriculture, agricultural production must be guaranteed in greenhouses. Yet, in most of those that have been built so far, there seems to be no kind of cultivation. Similarly, employment opportunities, originally flagged as a positive spillover of such investments, have not materialised.⁴

The mechanism that allowed the Italian government and the GSE⁵ to provide subsidies is called 'Fourth *Conto Energia*' and was reserved for plants that were supposed to become operational after 31 May 2011. The purpose was to 'gradually align the public incentive with technology costs, and to maintain stability and reliability in the market', as explained by the Ministerial Decree of 5 May 2011. The mechanism provides subsidies at a constant rate for 20 years, together with the payment for a portion of the energy produced, which has to be sold to the GSE.

The legal terms for the subsidies to be approved at the regional level were fixed by Decree no. 1116, 27 July 2011, signed by the Sardinian Regional Ministry of Agriculture, Oscar Cherchi. The decree appeared to be **the result of a regularisation procedure that allowed large companies to obtain access to the subsidies**, but in a rather ill-considered manner, and without sufficient time to meet the deadlines imposed by the national Ministry. The Municipality has therefore issued permits mainly on the basis of self-certification, without demanding a detailed agronomic plan on the agricultural activities.

B. Enervitabio Ltd solar greenhouse project

I. Facts and figures

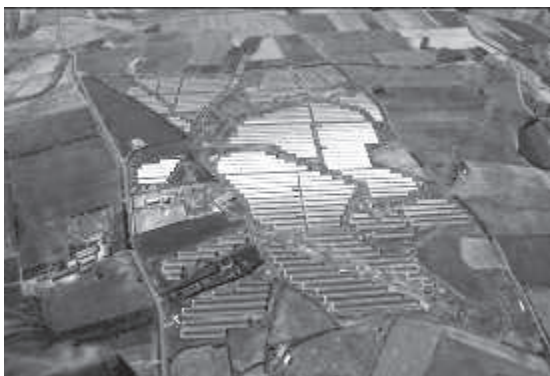


Photo: Enervitabio Ltd Santa Reparata, solar greenhouses, Narbolia

Enervitabio Ltd-Ravenna, owned by Paolo Magnani, arrived in Sardinia in 2008, after the greenhouses works had been completed. The plant was sold to a holding company, Win Sun of Hong Kong, which is controlled by the Sun Win Luxembourg, a limited liability company, with capital of 30,000 € and a registered office in Luxembourg administrated by Mr Qu Fajun, who was born in China and lives in Belgium.⁶

In Sardinia, Enervitabio Ltd has built seven plants in seven municipalities, each named after the local patron saint, perhaps to curry favour with the local communities. These municipalities are St Vero Millis, Giave, Narbolia, Padria, Santadi, St Giovanni Suergiu and Galtelli. Enervitabio Ltd has built plants to produce a total of about 80 mW, allowing the company to obtain almost €22 million in subsidies a year for 20 years, according to the GSE databases.

Enervitabio St. Reparata Ltd, with its registered office in the Municipality of Narbolia, has developed a PV energy plant that lies approximately 1 km from Narbolia's centre, and 1.5 km from St Vero Milis'.

Accessible information and/or documents on permits issued by the public authorities include:

- Final Authorisation ('*Provvedimento Unico*') no. 1, 11 November 2009, issued by the Municipality of Narbolia.
- Authorisation ('*Autorizzazione*') no. 3, 18 November 2010, for the construction of three power lines of 15 kV issued by the Engineering Bureau of the Municipality of Narbolia.
- Formal Decision Permit ('*Determinazione*') n. 4, issued by the Technical Department of the Municipality of Narbolia, 12 January 2012.

Questionable procedures: how the project has been skirting the law

Officially, in order to be recognised as agricultural activities solar greenhouses must meet specific requirements, already mentioned above:

1. The recognition of the status of 'professional farmer' for the entrepreneur. The Legislative Decree ('*decreto legislativo*') no. 99, 20 March 2004, states that this status can be granted on application by an agricultural entrepreneur managing a single farm.

2. For plants with a capacity exceeding 20kW, adequate agricultural capacity has to be demonstrated through a report including:

- annual income deriving from agriculture as of 31 December of the year preceding the submission of the application (in the case of existing activities);
- gross agricultural income deriving from solar greenhouses, related to the whole period of activity (Bill of Revenue Agency no. 32/E, 6 June 2009);
- the estimated income from PV energy production;
- the 'production potential' of crops in greenhouses;
- marketing plans for the agricultural production and energy produced;
- an investment plan illustrating prospective employment, costs and revenues of the project, as well as demonstrating that the agricultural income will at least equal revenues deriving from energy production.

3. A minimum illumination level of 75% inside the greenhouse.

In addition, according to the Regional Ministry of Agriculture Decree no. 1820, 20 July 2010, entrepreneurs who have obtained an authorisation by the Unified Agency for Productive Activities ("Sportello Unico per le Attività Produttive, S.U.A.P.") between 18th August 2009 and 1st April 2010 could make a request for validation before 2nd September 2010.

We argue that if the project had gone through the approval process at the Regional Government level, it would **not** have been authorised since it lacked:

- Legal proof of the proponent of the project being a 'unique farmer', since according to the Italian Business Register of the Commerce Chamber of Agriculture and Industry Magnani is the owner and/or manager of various farms across Italy, seven in Sardinia, five in Sicily, five in Apulia and one in Basilicata;

- The minimum degree of lighting required for solar greenhouse plants;
- Proof of economic management and entrepreneurial skills, as well as a business plan showing the prospective positive impacts of the project on employment and the local economy;
- A detailed plan on decommissioning, restoration of sites and disposal of materials;
- A declaration of commitment to the payment of a deposit to recuperate the site.

Managers of Enervitabio Ltd seemed aware of these irregularities since the company has never applied for the project to be validated.

Therefore, building permits for the solar greenhouses, as well as for energy production, have reportedly been issued without meeting the essential legal requirements, and without any reference to a credible comprehensive plan that demonstrates the prevalence of agricultural production, or a reclamation, disposal and restoration plan for the sites after 20 years.

Furthermore, irregularities of competence and legitimacy allegedly flawed the authorisation process. The Legislative Decree no. 387/2003 states that the Final Authorisation must be issued by the Regional Government, not by the local Municipality as happened in this case, and includes the obligation to take measures to recover the site after the activities have terminated.

C. Community responses and resistance to the project

I. Growing awareness: the ‘S’Arrieddu for Narbolia’ Committee

There have been strong criticisms concerning the solar greenhouse plant built by Enervitabio Ltd, coupled with alleged irregularities both in obtaining authorisation and in managing the firm’s activities.

We argue that the mega-solar greenhouse plant is affecting the municipalities’ agrarian systems by reducing the land available for agricultural purposes. The plant is expected to affect the broader food-production system and labour market across Sardinia. This places serious constraints on the right to produce food locally and hence on food sovereignty.

In addition, Narbolia’s case is an example of the wider trend of land concentration in the corporate sector, often backed by financial groups. We argue that such investments hardly benefit the local agricultural sector or provide relevant job opportunities or other kinds of local social and economic advantages.

These issues prompted community reactions and protests. Since 2012, local mobilisation and opposition have mainly been expressed via the local ‘S’Arrieddu for Narbolia’ Committee. S’Arrieddu is a part of the Municipality of Narbolia, where the greenhouse plant is located. The Committee has joined forces with the local environmental association ‘Italia Nostra’ and ‘Adiconsum Sardegna’. These groups have been intensively active in disseminating information and also bringing lawsuits concerning the irregularities outlined above.

‘S’Arrieddu for Narbolia’, as described by its militants, was founded with the aim of safeguarding the territory, taking into account its specificities, the history of its economic development, as well as ‘its vocation and plans for its future’.⁷ This is why it opposes the vast solar greenhouse project, which will harm the local community’s social, natural and economic environment and may have wider impacts within the region.

The Committee’s battle thus goes beyond simple opposition to the building of such ‘monster’ and represents a long-term engagement for protecting the commons, which include land, energy and water. It

opposes any form of distress sale and theft of the country's prime resources, such as fertile agricultural land, because this intimately affects the dynamics of land property and access to land, particularly in relation to youth and smallholders, and thus to food sovereignty. It also advocates a participatory and democratic model of energy production in order to secure energy sovereignty. Finally, it promotes participatory democracy and inclusive mechanisms, which have been clearly violated with respect to this investment, since the population was neither adequately informed, nor involved in the decision-making processes. The Committee does not blindly reject PV and other renewable energies, but calls for an environmentally, socially and economically sound and careful, participatory and democratic planning of these activities.

II. Strategies and actions of struggle and resistance⁸

In February 2012, when it became aware of the plant's existence, the 'S'Arrieddu for Narbolia' Committee requested information on the solar greenhouse project from the Mayor of Narbolia. In particular, it demanded access to documents and authorisations, and for a first City Assembly.

Enervitabio Ltd began the construction of solar greenhouses on 17 February 2012. The Committee therefore asked the Mayor to urgently call a special public session of the Municipal Council, in order to discuss the issue at the local level. Within a few days, the Mayor organised a public assembly allowing Enervitabio Ltd to present its plans to the local population. A slide-show presentation supported the views of engineers, agronomists and other experts, and was reinforced by a delegation of representatives of WinSun Group from Hong Kong, who had just taken over Enervitabio Ltd. The Committee raised critical issues about the projects with the company, and with the Mayor, saying: 'We want to knock down those greenhouses when they are built'. Fifteen days later, 'S'Arrieddu for Narbolia' obtained a copy of the plans for the plant, which apparently lacked key permits and annexures.

Two of the first promoters of the Committee, farmer Nello Schirru and his son Alexander, were arrested during a peaceful demonstration and subsequently tried and sentenced to three months' probation. They had tried to halt the cement mixer for the construction of 33,300 pillars of reinforced concrete (covering almost 3.5 ha), the foundations for the 1,614 greenhouse cells of 200 m² each.

Regional Counsellor Claudia Zuncheddu described it as an 'extremely serious intimidating action which [...] is embedded in a trend of repression towards all the movements which are born out of local necessities and criticalities and, as such, are not controlled either by political parties, or by institutionalised trade unions' (Zuncheddu, 2012).

On 7 March 2012, the 'S'Arrieddu for Narbolia' Committee sent the manager of the Technical Bureau of the Municipality of Narbolia, and other institutional bodies and agencies (including various Regional Councillors, the Ministers of Agriculture and Environment, GSE and the Public Prosecutor of Oristano) a request for an official annulment by means of internal review ('*auto-tutela*') of the permits issued to Enervitabio Ltd. On 14 March 2012, along with a new City Assembly called for by the Committee to inform the population of the appeal procedure which was underway, a note from the Ministry of the Environment announced that the design of solar greenhouses of Narbolia was among those subject to an Environmental Impact Assessment (EIA) and a Final Single Authorisation under regional competence.

On 26 March 2012, 'S'Arrieddu for Narbolia' presented a request to the Carabinieri of Cagliari and to the Public Prosecutor's Office of Oristano, copying all other institutions mentioned above, to intervene to halt works and seize the construction yard.

Meanwhile, construction was rapidly advancing, with employees also working over the holiday period. Some of the employees were migrant workers, especially Romanian and Moldavian, or came from other parts of Italy. The Committee convened on 16 April 2012, at the Courtroom of the Provincial Council of Oristano: invitations to representatives of regional institutional bodies and relevant subjects were declined en masse, however, and only very few political leaders, two mayors and no trade union spokesperson took part. Its aim was primarily to raise awareness about the project, as well as to illustrate to a wider audience, including the key regional personalities, the reasons for its opposition, based on the evidence of irregular procedures and non-compliance with legal requirements, presented above.

Finally, on 17 April 2012, the Committee, along with some independent farmers from Narbolia, filed a complaint concerning the Regional Administrative Tribunal (*'Tribunale Amministrativo Regionale'* (TAR), against the Municipality of Narbolia and Enervitabio Ltd for the authorisation to be annulled due to having been wrongly issued. The complaint also called for the immediate suspension of the works to stop the severe environmental damage that was taking place.

After having suspended the works, the TAR revoked the stoppage in response to an appeal by Enervitabio Ltd. Following the hearing, on 9 May 2012 the Tribunal decided not to grant precautionary suspension, since works were already advanced, postponing any decision on the merits of the case to the next hearing to be convened 'rapidly'.

On 2 March 2013, the 'S'Arrieddu for Narbolia' Committee organised a meeting attended by 12 regional committees and groups. Due to the local specificities of land policies in Sardinia, committees acting in defence of land rights and the agricultural use of land are rooted in the local social and political fabric. Each has its own structure and legal and political agenda. For these reasons, the gathering in Narbolia marked a rather unique moment in the history of land movements in Sardinia. Experiences were shared and joint actions were discussed.

'Land should be given to those who work for the good of the whole community and interventions that do not promote the abandonment of our country, the subsequent erosion of its capacity and the concentration and control by large financial groups, inhibiting our right to produce food and accentuating our food dependency'.

'We believe that it would be much more effective and democratic to use the huge incentives, which are going as usual to those who already have too much money, to distribute among the population. A fifth of the €140 million, which will be disbursed over the next 20 years to the benefit of already full pockets, not empty pockets, would have allowed municipalities within the district – the Union of Municipalities, for example – to build their own photovoltaic system that would produce the energy needed to meet the needs of the entire population and of all businesses and companies in the area. If photovoltaic panels were installed on the roofs of every home and industrial building, everyone would have benefited from it, without the risk of sliding towards a monopoly. With a more participatory democratic approach, the effects of such investments would have fostered local welfare and provided employment opportunities, certainly not a minor issue today'.

'S'Arrieddu for Narbolia' Committee

4. The way forward: prioritising the agricultural use of land

Evolving patterns in land use and land property highlight two concurrent trends both across Europe and specifically in Italy: shrinking access to land, especially for smallholders, and increasing land concentration, especially in the hands of firms and businesses that are increasingly interested in land resources.

We argue that agricultural land in Europe, as in many other countries across the globe, has become object of financial speculation as its value moves away from its current agricultural use. Financial capital speculates on land, mainly to grab the rental value, but also its environmental value, through allegedly sustainable practices such as carbon-sequestration mechanisms and renewable energy production, along with the value of natural resources associated with land, primarily water and biodiversity.

PV energy production to support small farmers through Italian government subsidies to install solar panels has become a pretext for obtaining hundreds of hectares of land, which are crucial for local, regional and national needs. In Sardinia, 39 requests for access to the GSE have been accepted, and more are being evaluated.

The case of Narbolia solar greenhouses illustrates that large industrial groups and foreign investors are taking advantage of government subsidies and national laws to increase their profits, regardless of the largely adverse impact on Sardinian agriculture. The negative environmental impact and the grab of arable land are the consequences of the right to produce being stolen from farmers and livestock keepers. As a matter of fact, according to Italian law, at any time land can be confiscated for the purpose of renewable energy production.

Hence the real issue is that of access to the land required for farming start-ups, especially those managed by young people, together with the capacity to support small-scale farm systems. Over the past 10 years, small-scale farming has suffered the combined effects of multi-level public policies, chiefly the CAP subsidies and facilities, all of which have been based on the assumption that reducing the number of farms would make agricultural activities more efficient.

Effective access to land for young people and smallholders does not necessarily have to be secured through ownership: the sale and purchase of land can co-exist with regulations that promote and protect the agricultural use of land, and not its possession.

As stated in Article 42 of the Italian Constitution, 'property is public or private. Economic assets may belong to the State, to public bodies or to private persons. Private property is recognised and guaranteed by the law, which prescribes the ways it is acquired, enjoyed and its limitations so as to ensure its social function and make it accessible to all'. Therefore, public policies may restrict private property 'so as to ensure its social function and make it accessible to all'.

With regard to agricultural use, Article 44 reads: 'for the purpose of ensuring the rational use of land and equitable social relationships, the law imposes obligations and constraints on private ownership of land; it sets limitations to the size of property according to the region and the agricultural area; encourages and imposes land reclamation, the conversion of latifundia and the reorganisation of farm units; and assists small and medium-sized properties'.

Such legal provisions leave room for ensuring improved access to land by small-scale farmers and the means to protect their livelihood. By contributing to food sovereignty, agriculture also contributes to solving the multiple crises afflicting Italy, and Europe more generally, from an economic, financial, environmental and social perspective. Farms that are dismantled cannot be recreated and the suffering caused will not be compensated. But it is nevertheless possible to strengthen existing small-scale farms

and create new ones in order to hinder the process of agricultural, economic and social desertification taking place in Italy.

Therefore, we call for the following policy changes and commitments, in order to return to the path of agricultural development and employment at the Italian and European level:

- **Support medium, small and very small farms**, which number more than 1 million in Italy and constitute the core of its food production. Having shown the capacity to adapt in order become more resilient and to cope with the current crises, we argue that they would react more quickly to such adversity with **new structural and legislative support policies** that would not involve increasing government expenditure.
- Give **strong priority to the agricultural use of land**, as a form of resistance to the dynamics of its financialisation and capitalisation, which encouraged companies to engage in land speculation, in order to capture its value and the resources associated with it.
- Recognise that the intertwining of European and national-level **agricultural, land and energy policies is the main mechanism through which land is grabbed** in the North.
- Advocate for a **'Land Directive' at the European level** that opens the way for a European agrarian reform, which should be grounded in the provisions of the Tenure Guidelines⁹, to facilitate access to land by youth aspiring to create new farms and existing small-scale farmers seeking to expand their farms. Until now, all policies have favoured large-scale agro-industry, which is capital-intensive and tends not to create employment opportunities. The EU ratified the Tenure Guidelines, which means that Italy and the other EU Member States are **responsible for their implementation and enforcement** through national laws. In addition, the EU will have to adopt a Directive which includes the Tenure Guidelines as part of its legal basis.

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Endnotes

1. See <http://www.simoneriggio.com/Narbolia/>
2. See GSE databases, available at: <http://www.gse.it/it/Conto%20Energia/Risultati%20incentivazione/Pages/default.aspx/>. GSE is the Italian state-owned company that promotes and supports renewable energy.
3. See GSE databases and footnote 2.
4. See the archive of requests for authorisation answered by the Sardinian Regional Ministry of Agriculture.
5. The sole shareholder of GSE is the Ministry of Economy and Finance, which exercises its rights in consultation with the Ministry of Economic Development. GSE is the parent company of three subsidiaries: 'Acquirente Unico' (AU) 'Gestore dei Mercati Energetici' (GME) and 'Ricerca sul Sistema Energetico (RSE), which is active in research in the electricity and energy sectors and in projects of strategic interest. GSE manages support schemes for renewable energy sources at the central level, which take into account the different technologies of the plants and the level of maturity of the related markets. The granting of support by GSE requires a careful technical assessment of the plants in order to check their compliance with sector-specific legislation. In the past few years, GSE's technical responsibilities for qualification and verification of plants have been extended to the assessment of the architectural integration of solar photovoltaic (PV) plants into buildings and to energy efficiency.
6. Based on information on the cases brought to the Regional Administrative Tribunal (TAR) court of Sardinia and to the TAR with national competence, based in Lazio.
7. See <http://www.scirarindi.org/scirarindi/?q=node/6233>.
8. All the information, data and quotations in this section were gathered by Crocevia, which belongs to the resistance movement, in public meetings, hearings and other gatherings, as well as from pamphlets and documents published and disseminated to Committee members and the general public.
9. The Committee on World Food Security (CFS) of the Food and Agricultural Organization of the United Nations (FAO) has recently completed the intergovernmental negotiations on the 'Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the context of National Food Security', which have been approved by governments in the Extraordinary CFS Meeting of 11 May 2012, held at the FAO in Rome. Many elements can be upgraded to support the defence of the agricultural use of the land and to better deal with conflicts that arise between different stakeholders in Sardinia. Certain articles are highly relevant to land-grab cases concerning public authorities supporting the production of renewable energy, in particular: articles 4.3 and 4.10, on private and public rights and responsibilities related to land tenure; and articles 12.3–12.5 and 12.8–12.12, on land-related investments.

