

Toyama Environmental Efforts 2017

とやまの環境 2017



Panoramic view of the Tateyama Mountain Range from Amaharashi Coast
雨晴海岸から海越しに眺める立山連峰



TOYAMA Prefectural Government

Foreword

ごあいさつ



Takakazu Ishii
Governor of
Toyama prefecture

富山県知事
石井 隆一

Toyama Prefecture prides itself on its phenomenal natural beauty, from the majestic peaks of the Tateyama Mountain Range to the mysterious mirages that can be seen on Toyama Bay. Toyama has the greatest percentage of natural vegetation of any prefecture on the main island of Japan, as well as the nation's finest pure water environment. Toyama Prefecture is truly blessed with natural abundance and natural beauty.

However, from around the 1910s, people of Toyama have also felt the grave influence of Itai-itai Disease, one of the four major pollution-related diseases of Japan. Victim organizations, responsible parties, the government, and others have made ceaseless efforts to overcome the great suffering caused by this disease.

In recent years, the combined efforts of Toyama's government and citizens toward environmental conservation have been visible, including efforts like introducing renewable energy sources such as small hydropower generators, eliminating the distribution of free plastic shopping bags at stores prefecture-wide, and introducing a new Toyama-specific tax to help conserve woodlands. Moreover, Toyama has expanded its environmental conservation actions in the form of international cooperation such as establishing and supporting the Regional Coordinating Unit (RCU) of the Northwest Pacific Action Plan (NOWPAP) under UNEP and being a member of the Association of North East Asia Regional Governments (NEAR).

These efforts being acclaimed highly, Toyama was selected to host the G7 Environment Ministers' Meeting 2016. In the meeting, 'Toyama Framework on Material Cycles' was adopted, by which countries enhance resource efficiency and promote the 3Rs (reduce, reuse and recycle).

Then, just after the G7 Environment Ministers' Meeting, Toyama Prefecture held 2016 Environmental Expert Meeting among North-east Asia Region with participants from municipalities and universities in China, Japan, Korea and Russia. Following 'Toyama Declaration 2016' adopted in the meeting, necessary actions have been and will be taken under cooperation among relevant local governments for environmental conservation in the Northwest Pacific region.

Toyama Prefecture, as an environmental leader, will continue taking an active role in every program and initiative in environmental conservation in and out of the prefecture.

富山県は、雄大で美しい立山連峰や蜃気楼が見られる神秘の海富山湾、さらには本州一の植生自然比率を誇る森林、清らかな水環境など、豊かで美しい自然に恵まれています。

一方、本県では、大正時代頃から日本の四大公害病の一つと言われるイタイイタイ病が発生し、地元住民等に深刻な影響を及ぼしてきましたが、被害者団体や原因企業、行政などのたゆまぬ努力により、多くの困難を克服してきました。

また、本県では、小水力発電等の再生可能エネルギーの導入、県内全域でのレジ袋の無料配布廃止、「水と緑の森づくり税」を活用した森づくりなど、県民総参加で環境保全に取り組むとともに、国連の北西太平洋地域海行動計画 (NOWPAP) 地域調整部の設置・支援や北東アジア地域自治体連合 (NEAR) による国際環境協力などを積極的に推進してきたところです。

こうしたことが評価され、2016年5月に、本県で「G7富山環境大臣会合」が開催されました。会合では、各国が連携し資源や廃棄物の有効利用を進める枠組みとして、本県の名前を冠した「富山物質循環フレームワーク」が採択されました。

また、大臣会合の開催後には、本県の主催で日中韓口の自治体や大学等からの参加を得て「2016北東アジア自治体環境専門家会合 in とやま」を開催し、新たな「2016 とやま宣言」が採択されました。今後、この宣言に基づき、環日本海地域の環境保全に各自治体と連携して取り組むこととしています。

県では、今後とも、環境保全に率先して取り組むフロントランナーとして、各般の取組みを一層推進してまいります。

Toyama G7 Environment Ministers Meeting

G7富山環境大臣会合について

G7 Toyama Environmental Ministers' Meeting

G7 Toyama Environmental Ministers' Meeting was held in Toyama City, Toyama on May 15-16, 2016 with 140 participants, including environment ministers from G7 countries (Japan, Italy, Canada, France, USA, UK and Germany) and the EU, and representatives of eight international organizations. Besides, about 260 people from international and domestic media gathered in Toyama.

Ministerial-level participants exchanged views on environmental protection policies in seven topics such as climate change and marine litter, and the communique was issued at the end of the meeting. The communique included 'Toyama Framework on Material Cycles' by which the international community collaborate to enhance resource efficiency and promote the 3Rs. This framework was also included in G7 Ise-Shima Leaders' Declaration.

2016年5月15日、16日に、G7(伊、加、仏、米、英、独、日)の環境担当大臣はじめEU(欧州連合)及び8つの国際機関の代表など、国内外から約140名(このほかメディア登録約260名)の方々に参加し、G7富山環境大臣会合が開催されました。

会合では、気候変動及び関連施策や海洋ごみなど7つのテーマについて議論が行われ、その成果がコミュニケとして取りまとめられました。なかでも、資源効率性・3Rについては、国際社会が連携し、資源や廃棄物の有効利用を進める「富山物質循環フレームワーク」が採択されました。なお、このフレームワークは、G7伊勢志摩サミットの首脳宣言にも盛り込まれました。



Photo Session

フォトセッション



Marine Litter Session

Mr. Ishii, Mayor of Toyama Prefecture, introduced actions of Toyama Prefecture on marine litter and international cooperation in the morning session on May 16.

海洋ごみのセッション

石井知事が本県の海岸漂着物対策や国際環境協力の取組みなどを説明しました。

About Toyama Prefecture



富山県の姿

Toyama Prefecture features a remarkably dynamic landscape. Over just 40 to 50 kilometers, the Toyama Plain connects the 3,000 meter-high peaks of the Tateyama Mountain Range to the 1,000-meter-depths of Toyama Bay, for an elevation difference of some 4,000 meters.

The snow and rain that fall all over the Tateyama area provide a rich source of pure water, feeding rivers both on the surface and below, as well as underground water, flowing into Toyama Bay and providing it with a wealth of nutrients. As a result, Toyama Prefecture enjoys an abundance of delicious foods from mountains and fields, and Toyama Bay is likewise a treasure trove of excellent seafood. Toyama's large supply of clean water is also used for electric power, helping make Toyama one of the preminent manufacturing prefectures on the western coast of Japan.

富山県は、標高3,000m級の立山連峰から水深1,000mを超える富山湾に至る高低差4,000mを、直径40kmから50kmの富山平野がつなぐというダイナミックな地形を有しています。

立山一帯に降り注いだ雪と雨は、清らかで豊かな水の源となり、河川水、伏流水、さらに地下水となって富山湾に豊富な栄養素を供給しており、そのため、本県は多彩な野の幸、山の幸とともに新鮮で美味しい海の幸の宝庫となっています。また、豊富で良質な水と電力を活かして日本海側屈指の「ものづくり県」となっています。



Area (面積).....	4,247.61km ² (East-West 90 km, North-South 76 km 東西 90km、南北 76km)
Population (人口).....	1,060,091 (As of Jan. 1, 2017 2017年1月1日現在)
Annual Mean Temperature (年平均気温).....	14.1°C (Jan. 1月 2.7°C ~ Aug. 8月 26.6°C)
Annual Mean Precipitation (年間降水量).....	2,300mm
Percentage of Natural Vegetation (植生自然比率)...	30.0% (Ranked 3rd in Japan, 1st in mainland Japan 全国3位・本州一)



Scattered Houses on the Tonami Plain
礪波平野に広がる散居村



Fixed-net Fishing (aerial view)
定置網漁業



Delicious Seafood from Toyama Bay
富山湾の豊かな海の幸



Alluvial Fan of the Kurobe River
黒部川扇状地



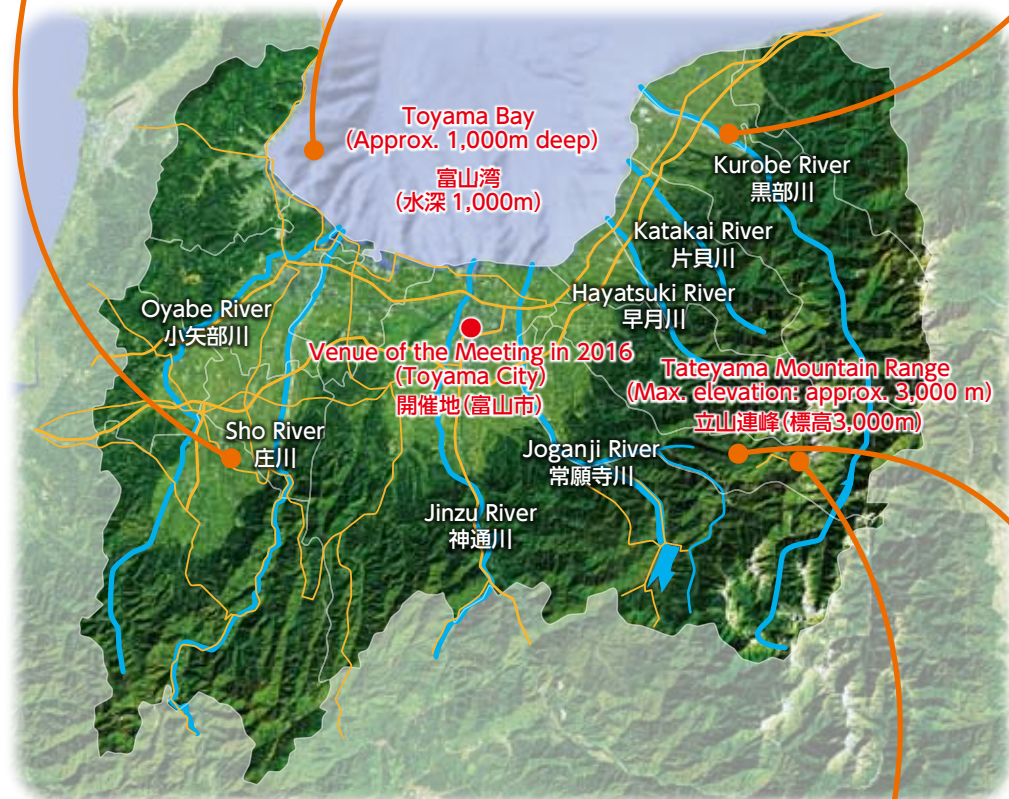
Rice agriculture
96% of Toyama's farmland grows rice (Ranked 1st in Japan)
田植作業 水田率96%(全国1位)



Rice harvest
稲刈作業



Shomyo Falls
称名滝



Value of product shipments, 3.6 trillion Japanese Yen in 2014
Home to a Vigorous Manufacturing Industry
活力ある工業集積県
製造品出荷額 2014年:3.6兆円



Outputs of Pharmaceutical Production:
Grew from 263.6 billion Japanese Yen in 2005 to 616.3 billion Japanese Yen in 2014 (Ranked 2nd in Japan)
Toyama, the Medicine Capital
くすりの富山
医薬品生産金額 2005年:2,636億円→2014年:6,163億円(全国2位)



Mikurigaike Lake and Mt. Tateyama
みくりが池と立山



Toyama Prefecture has long been concerned with flooding. Through efforts such as *Sabo* erosion control and river improvement works, the people of Toyama have earned a sense of reliable safety. In particular, the Tateyama Caldera area has been subject to a great deal of *Sabo* erosion control works to prevent the flow of sediment in the Toyama Plain, and this work has played a critical role in protecting the living environment of Toyama.

Toyama has received universal acclaim for the work done on the safe and eco-friendly erosion control facilities within the Tateyama Caldera, such as Shiraiwa *Sabo* Dam, and the Toyama prefectural government is working to take this international acclaim to the next level, with the goal of achieving UNESCO World Cultural Heritage status.

水害に悩まされてきた富山県は、砂防工事や河川改修に取り組み、人々の安心な暮らしを確保しました。

特に立山カルデラ一帯では、富山平野への土砂流出を防ぐ大規模な砂防工事が行われており、富山県の生活環境を守る大切な役割を担っています。

富山県では、立山カルデラ内の防災とエコを共に実現している白岩砂防堰堤など砂防施設群の顕著な普遍的価値の国際的な評価を一層高め、世界文化遺産への登録を目指しています。

Tateyama Sabo Erosion Control

立山砂防

The Tateyama area of Toyama receives over 5,000 mm of precipitation annually. The Tateyama Caldera, with its fragile geological structure, experienced a major earthquake in 1858 that led to the accumulation of some 200 million cubic meters of sediment. This combination of factors leads to a risk of landslides more severe than virtually anywhere else on earth.

The Joganji River flows very rapidly from its source in the Tateyama Caldera to Toyama Bay: the water drops from the height of some 3,000 meters and runs for 56 kilometers. In the event of heavy rain, the river would often overflow, causing serious damage to the Toyama Plain.

Starting in 1906, *Sabo* erosion control work has been underway, helping to limit the flow of sediment. Today, the people of Toyama can rest assured that they are safe from floods and the prefecture ranks one of the best places for quality of life.

富山県の立山一帯は、年間降水量が5,000mmを超え、さらに脆弱な地質構造の立山カルデラには、1858年に発生した大地震による崩壊土砂が2億m³も堆積しており、土砂が流出しやすい条件が幾つもある、世界に類を見ない過酷な環境となっています。

この立山カルデラを源流とする常願寺川は、標高差約3,000mを延長56kmで一気に富山湾まで流れ下る急流河川であり、大雨の際には度々大きな洪水を引き起こし、富山平野に甚大な被害を与えてきました。

1906年から現在まで続けられている砂防工事により、土砂の流出が抑えられ、今では人々が安全に暮らせる、全国でも有数の住みよい県となっています。



Under construction (1933)
施工中(1933年)



Completed (2007)
現在(2007年)

Historic *Sabo* Erosion Control Facilities within Tateyama Caldera (Dorodani Sabo Dams)

Before construction, the constant landslides and instability of the ground prevented plants from being able to take root. Today, however, 22 dams have been so successful in stabilizing the ground that they are all but hidden by the new greenery. The *Sabo* erosion control work in Tateyama area has received praise worldwide for its combination of disaster prevention and eco-friendliness.

立山カルデラ内の歴史的砂防施設 (泥谷砂防堰堤群)

工事前には崩壊し続ける土砂により植物が定着しない荒地でしたが、現在は22基の堰堤が見えないほどの緑で覆われています。立山砂防は防災とエコを共に実現した、世界に誇れる防災システムです。



Tateyama Caldera and the Joganji River

Tateyama Caldera is a huge oval-shaped depression (6.5 km from east to west, and 4.5 km from north to south) formed by erosion caused by heavy rain around the Midagahara volcano.

立山カルデラと常願寺川

立山カルデラは、弥陀ヶ原火山などが大雨などの浸食を受けて形成された東西6.5km、南北4.5kmの楕円形の巨大な窪地です。

Shiraiwa Sabo Dam

With a height of 63 meters (108 meters including its secondary levee), the colossal Shiraiwa Sabo Dam is the tallest erosion control facility in Japan. The academic value of the structure has been highly recognized as representation of advanced technology in modern *sabo* erosion control works, and in 2009, it was the first erosion control facility to be nationally designated as an Important Cultural Property.



白岩砂防堰堤

我が国唯一の堤高63m(副堤を含めると108m)を誇る大規模な砂防施設です。近代砂防施設のひとつの技術的到達点を示す学術的価値の高い構造物と評価され、2009年に砂防施設としては初めて国の重要文化財に指定されました。



Since the 1960s, during which Japan entered a period of rapid growth, Toyama has worked to fight air pollution, water pollution and other issues that came alongside this economic expansion. In particular, the tireless efforts of victim organizations, responsible parties, the government, and others have made it possible to overcome the hardships of Itai-itai Disease, one of the four major pollution-related diseases of Japan, by taking thorough anti-pollution measures, providing victim support, and restoring polluted agricultural land, among other initiatives.

高度成長期(1960年代から)の富山県は、経済成長に伴う大気汚染や水質汚濁など各般の公害の防止対策に取り組んできました。特に日本の四大公害病のひとつであるイタイイタイ病については、被害者団体や原因企業、行政などのたゆまぬ努力により、多くの困難を克服し、公害防止対策の徹底、被害者救済、汚染農用地の復元などを実現してきました。

Itai-itai Disease (Pollution-related disease)

イタイイタイ病

In the central area of Toyama Prefecture, along the middle and lower basin of the Jinzu River, there were occurrences of Itai-itai Disease starting around the 1910s, which caused severe pain all throughout the body. The disease was caused by cadmium being released into the river upstream by the Kamioka Mine, and not only the sick but also their families and the communities suffered from the cadmium poisoning.

The people of the area, having experienced harm to both their health and their agricultural livelihood, brought and ultimately won a lengthy lawsuit against the mining company in 1972, and both the local people and the parties responsible came to an agreement in which the parties responsible would provide help for the patients and to work to restore the environment.

In Toyama, care for these patients, such as coverage of medical expenses by the local government, has been provided even before the legal system settled matters. In addition to recognizing as new patients, annual health surveys are performed on the residents of the river basin with the goal of maintaining public health.

Additionally, as time has passed, concerns have arisen about the loss of the memory of the disease, due to dissipation of relevant documents and aging of the people concerned. As a result, the Itai-itai Disease Museum was established in 2012 in order to preserve and pass down relevant documents, as well as to provide information on the lessons learned and future-oriented environmental protection measures and more, to visitors from both Japan and abroad.

富山県中央部を流れる神通川の中下流域では、大正時代頃から全身が激しく痛むイタイイタイ病が発生し、患者やその家族、地元住民等に深刻な影響を及ぼしてきました。これは、上流部の神岡鉱山から排出されたカドミウムが原因です。健康被害や農業被害に苦しめられた住民たちは、1972年原因企業との長期の裁判に勝訴し、住民側と原因企業との取り決めにより患者救済や環境の復元の取組みが進められました。

富山県では、法制度が整う以前から被害者への公費による医療救済を行うなど、患者を救う取組みを進めてきています。現在も、患者の認定を行うとともに、毎年、流域住民の健康調査を実施し、健康管理に努めています。

また、長い年月の経過とともに、関係資料の散逸や関係者の高齢化に伴う風化が懸念されるようになったため、2012年にイタイイタイ病資料館を設置し、関係資料の保存、継承に努めるとともに、国内外にイタイイタイ病の教訓と、これを踏まえた未来志向の環境保全策等について情報発信しています。



The Jinzu River returned to its former glory
清流を取り戻した神通川



Farmland made once again safe and fertile
実り豊かで安全な農地を取り戻した



Toyama Prefectural Itai-itai Disease Museum
富山県立イタイイタイ病資料館

Countermeasures against Environmental Damage 環境被害対策

After the lawsuit became final and binding, several countermeasures have been put into place, including on-site investigations at Kamioka Mine by the people harmed, and restoration of contaminated rice paddies. Through these long, tireless efforts, the Jinzu River and the area around it have been restored to their former beauty.

裁判後、被害住民による神岡鉱山への立入調査などの「発生源対策」、汚染された水田の土壌復元工事などの「汚染農地対策」が実施されることになりました。こうした努力が長年続けられてきたことで、神通川とその流域はかつての美しい姿を取り戻してきました。

On-site Investigations 立入調査



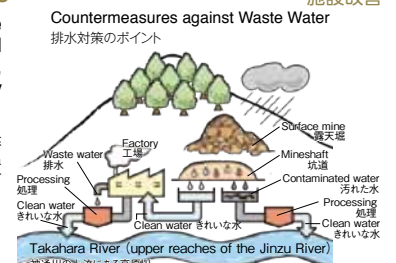
In accordance with the Pollution Control Agreement between the people of the area and the company responsible, since 1972, there have been annual on-site investigations conducted by both the people of the area and investigative groups of specialists.

住民たちと原因企業との間で結ばれた「公害防止協定書」に基づき、1972年以来毎年、住民や専門家からなる調査団の立入調査が行われています。

Facility Improvements 施設改善

The company responsible has worked to reinforce and improve its drainage facilities, and has established emergency water storage tanks.

原因企業は、排水設備の改善や増強のほか、緊急貯水槽の設置などの施設改善を行ってきました。

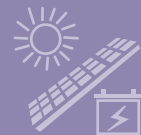


Countermeasures against Contaminated Farmland 汚染農地対策



Within Toyama Prefecture, 1,686.2 hectares of agricultural land were determined to be in need of cleaning. After 33 years of work and 40.7 billion Japanese Yen in total costs, this farmland was finally restored to its original condition in March of 2012.

県では、汚染対策が必要な農地として、1,686.2haの地域を定め、33年の長い年月と総事業費407億円を投じて、土壌の汚染を取り除く復元工事を進め、2012年3月に完成しました。



Promotion of Renewable Energy

再生可能エネルギーの積極的な導入

Toyama Prefecture has actively adopted renewable energy technologies such as small hydropower plants, taking advantage of abundant water resources to realize a low-carbon society.

富山県では、豊富な水資源を活かした小水力発電など再生可能エネルギーの導入を進め、低炭素社会の実現に向けて取り組んでいます。



Small Hydropower Plants

小水力発電所



Irrigation system with Different Elevations
落差を有する農業用水

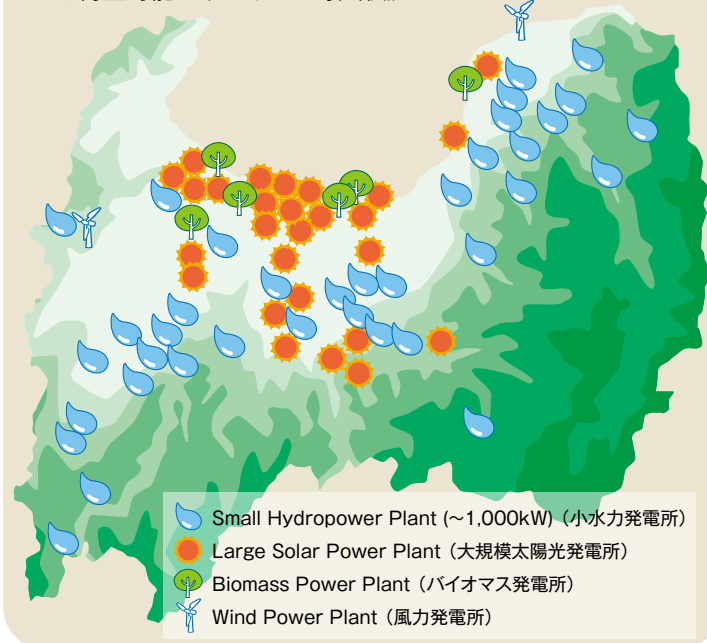
Toyama Prefecture is ranked second nationwide in use of water-power resources, and the prefecture encourages the installation of small hydropower plants on irrigation canals and small and medium-sized rivers. At present, there are 37 small hydropower plants (producing 10-1,000 kW of power) in operation throughout Toyama, including 20 which are certified under the feed-in tariff scheme and the total capacity of electricity generated by them is the largest in Japan in this category. Toyama prefecture plans to increase the number of small hydropower plants to 45 by March of 2022.

富山県では、全国第2位の包蔵水力を活かして、農業用水や中小河川での小水力発電の整備を促進しています。

現在、37カ所の小水力発電所が稼働(固定価格買取制度による20発電所の発電設備容量は日本一)しており、2022年3月までに45カ所の小水力発電所の整備を目指しています。

Major Renewable Energy Generation in Toyama

主な再生可能エネルギーの導入状況



Solar Power Plants

太陽光発電所



Promoting solar power generation (home, solar farms and others)

住宅用太陽光発電やメガソーラー等の設置を推進しています。



Biomass Power Plants

バイオマス発電所



Promoting biomass energy generation (woody and others)

木質バイオマスなどバイオマス資源の効率的な利用を促進しています。

Number of Facilities in Operation, by Operating Body 事業主体別運転箇所数	
Prefecture 県	8
Land Improvement Districts 土地改良区	14
Electric Company 電力会社	7
Cities, Towns and Villages 市町村	5
Private Enterprise 民間事業	3
Total 合計	37

(As of February 2017)

(2017年2月現在)



Kurobe Dam 黒部ダム

TOYAMA



Toyama Prefecture is actively taking advantage of its world-class supply of fast-flowing rivers for electrical generation. With a total hydropower generation capacity of 106.2 billion kilowatt-hour (kWh), Toyama Prefecture leads Japan: roughly 10% of all hydropower generated in Japan comes from Toyama.

富山県は、世界有数の豊かで急流な河川の水を利用して電源開発を積極的に進めています。

総水力発電量は106.2億kWhで日本一、全国の水力発電量の約1割を占めています。



A tax is collected from the people and businesses of the prefecture to help preserve the forests that cover so much of Toyama. This tax helps fund the wide variety of woodland preservation and maintenance efforts performed by the people of Toyama.

富山県では、県土の多くを占める森林を守り育てるため、「水と緑の森づくり税」を活用して、幅広い県民の参加を得ながら森林の整備と保全に取り組んでいます。

Preserving the Water and Woods of Toyama

水と緑の森づくり

To preserve the woodlands that belong to all of the people of Toyama, the citizens of Toyama approved a tax that would be used to fund environmental conservation efforts. This tax has been used to help maintain the health of local forests, and restore remote mountain wasteland through cooperation between Toyama Prefecture and its citizens. It is also used to promote propagation of pollen-free Japanese cedars, as well as support citizen-led volunteer efforts.

県民全体の財産である森林を保全するため、県民の賛同を得て導入した「水と緑の森づくり税」を活用し、県民協働による里山林の整備や荒廃した奥山の復元、優良無花粉スギ「立山 森の輝き」の普及、森林ボランティアの活動支援などに取り組んでいます。



Volunteer forestry activities
ボランティアによる森づくり



Forest maintenance by local townspeople
地域住民による里山林の整備

Propagation of pollen-free Japanese cedar, *Tateyama Mori no Kagayaki*

Pollen allergies and "hay fever" are common worldwide; in the case of the Japanese cedar, roughly 25% of all Japanese people are allergic to its pollen. To help combat this, Toyama Prefecture developed Japan's first pollen-free Japanese cedar cultivar (*Tateyama Mori no Kagayaki*) in 2012, and is encouraging efforts to plant them.

優良無花粉スギ「立山 森の輝き」の普及

世界中に花粉症はありますが、スギの花粉症は、日本人の4人に1人が発症しているといわれます。

スギ花粉症対策として、本県で開発した優良無花粉スギ「立山 森の輝き」を日本で初めて2012年から生産し、普及を図っています。



Planting pollen-free Japanese cedars
無花粉スギの植樹活動



Raising pollen-free Japanese cedars
(mass production)
無花粉スギの育苗（大量生産体制の確立）

Next-generation Horticultural Facilities

Toyama is home to a number of next-generation horticultural facilities featuring combined heat (generated by burning wastes) and power systems and advanced environmental control systems such as information and communication technology (ICT). These 28 ICT-equipped greenhouses are used to grow tomatoes, eustoma flowers, and more, without using fossil fuels.



次世代施設園芸拠点の整備

廃棄物の燃焼発電による電力と廃熱やICTによる高度環境制御技術を活用した次世代施設園芸拠点を整備しました。28棟のICT対応温室で、化石燃料に依存せずにフルーツマトやトルコギキョウ等を生産しています。



Toyama Bay's Induction into the Most Beautiful Bays in the World Club



The Most Beautiful Bays in the World Club is an NGO supported by UNESCO. Club inductees include 41 bays across 24 countries and one territory, including the World Heritage sites Mont Saint-Michel Bay in France and Hạ Long Bay in Vietnam, as well as other iconic locations such as San Francisco Bay in the US. In October of 2014, Toyama Bay was inducted into the club with unanimous approval.

富山湾の「世界で最も美しい湾クラブ」への加盟

「世界で最も美しい湾クラブ」は、ユネスコが支援する非政府組織で、世界遺産のフランス・モンサンミッシェル湾、ベトナム・ハロン湾のほか、アメリカ・サンフランシスコ湾など、世界の名立たる41湾（24カ国と1地域）が加盟しています。

2014年10月に富山湾の加盟が全会一致で承認されました。



Club Induction Commemorative Monument (Kaiwomaru Park)
クラブ加盟記念モニュメント（海王丸パーク）

Toyama's prefecture-wide environmental conservation efforts were highly praised, as was the exquisite view from the bay of the 3,000-meter-tall Tateyama Mountain Range.



海越しに3,000m級の立山連峰を望む世界でも稀な景観や、県民総参加の環境保全の取組み等が高く評価されました。

View of the Tateyama Mountain Range from Amaharashi Coast
雨晴海岸から海越しに眺める立山連峰

Protecting Toyama's Famous Springs

Toyama Prefecture is home to eight of the 100 best water sources of Japan, more than any other single prefecture. To preserve the environment that provides all of this pure water, Toyama encourages community-based conservation efforts.

名水の保全

富山県は、国の名水百選に全国最多の8カ所が選定されています。豊かで清らかな水環境を保全するため、地域に根差した保全活動の促進などに取り組んでいます。

Natural springs in the alluvial fan of the Kurobe River (used as a communal place for washing and cooling food and other items).

黒部川扇状地湧水群（生地の共同洗い場）





Leading Japan in Reducing Plastic Shopping Bags

全国に先駆けたレジ袋の削減

In 2008, Toyama became the first prefecture in Japan to stop providing free plastic shopping bags at nearly all stores' checkout counters prefecture-wide. This was accomplished not through any legal means, but through the collective independent efforts of the citizens, businesses, and affiliated organizations of entire Toyama Prefecture. Today, Toyama continues to work toward the goal of 100% of stores prefecture-wide no longer offering free plastic shopping bags.

富山県では、法令等の規制によることなく、県民、事業者、関係団体、行政が一体となった自主的な取組みにより、2008年から全国で初めて県単位でのレジ袋の無料配布廃止の取組みを実施しています。

The First Prefecture to Ban Free Plastic Shopping Bags

全国初のレジ袋
無料配布廃止



Request for cooperation at storefront
店頭での協力呼びかけ

Through the efforts of organizations such as consumer groups and ladies' societies to encourage the use of reusable shopping bags; in 2008, Toyama became Japan's first prefecture to stop distributing free plastic shopping bags at stores, without using any legal means. Support from the citizens, businesses, and the government of Toyama has continued to expand drastically: as of FY 2015, 95% of shoppers in the prefecture use reusable shopping bags, not disposable plastic shopping bags, setting a high standard as the country's leader. This action has led the call to ban plastic shopping bags nationwide: now, in Toyama and 21 other prefectures, plastic shopping bags are no longer distributed for free at stores.

富山県では、消費者団体や婦人会などが取り組んでこられたマイバッグ持参運動をもとに、2008年から法令等の規制によらず全国で初めて県単位でのレジ袋無料配布廃止の取組みを実施しました。

県民、事業者、行政等の一体となった取組みにより、実施店舗数は当初に比べて大きく拡大し、2015年度のマイバッグ持参率も95%と全国トップの高い水準を維持しています。また、このレジ袋無料配布廃止の運動は本県を含め全国21県に大きく広がっています。



Number of stores across Toyama no longer offering free plastic shopping bags (As of October 2016)
レジ袋の無料配布を廃止した店舗数 (2016年10月現在)



Usage of reusable shopping bags (As of FY2015)
マイバッグ持参率 (2015年度)

Increased Efforts
取組みのステップアップ

Establishing the Toyama Eco Store System

「とやまエコ・ストア制度」
の創設



Recyclable material collection receptacles in front of a supermarket
スーパーマーケット店頭で設置された資源物回収ボックス

In 2013, the Toyama Eco Store system was established, in addition to stopping free distribution of plastic shopping bags. The goals of the system include storefront collection of recyclable materials, carbon footprint reductions, and more. There are already 1,152 stores registered as Toyama Eco Stores.

2013年には、レジ袋の無料配布廃止に加え、資源物の店頭回収や低炭素化の取組みなどを行う「とやまエコ・ストア制度」がスタートし、1,152店舗が登録されています。



"Eco-boy," the logo of the Toyama Eco Store system
「とやまエコ・ストア制度」のシンボルマーク 「エコぼうや」



Number of stores registered with the Toyama Eco Store system (As of October 2016)
「とやまエコ・ストア制度」登録店舗数 (2016年10月現在)

Protecting Nature in the Tateyama Mountain Area

立山の貴重な自然の保全

Tateyama mountain area is a symbol of Toyama, being home to a number of unique species of plants and animals, such as the rock ptarmigan. The area is also among Japan's preeminent mountainous sightseeing destinations. Toyama has set a number of regulations in place to help protect the natural environment of the mountain area, including restrictions on private cars and bus exhaust gas regulation.

Bus Exhaust Gas Regulation

Tateyama toll road with bus exhaust gas regulation
バスの排出ガスを規制している立山有料道路



Since its opening, the Tateyama Kurobe Alpine Route has been closed off to private cars; this restriction has been adopted as a model for mountain tourist areas nationwide. In addition, concerns over the potential influences on the environment and scenery caused by increased tourism to the mountain area accompanying the service of the Hokuriku Shinkansen bullet train line have led Toyama to enact unique regulations on bus exhaust gas starting April 2015. This marked the first time in Japan that legal means were used for natural conservation.

バスの排出ガス規制

立山・黒部アルペンルートは、開通当初から一般車両（マイカー）の乗り入れが禁止されており、全国の山岳観光地のマイカー規制のモデルになりました。

さらに、北陸新幹線の開業により観光客の増加が見込まれ、立山の貴重な自然環境や景観への影響が懸念されることから、富山県独自に条例を制定し、2015年4月からバスの排出ガスを規制しています。自然環境の保全を目的としたバス排出ガス規制条例の制定は、全国初です。



Native alpine plant (Geum pentapetalum)
高山植物（チングルマ）

TOYAMA

Rich Geothermal Resources

Toyama ranks second in Japan in terms of geothermal resources. Taking advantage of this awesome potential resource, Toyama Prefecture has been assessing the geothermal resources (amount) in Tateyama Onsen (hot spring) area in an environmentally-friendly manner.

豊富な地熱資源

地熱資源量が全国第2位である本県の高いポテンシャルを活かした新たな電源として地熱発電開発に取り組むこととしており、現在、立山温泉地域において、環境等に配慮しながら地下地熱資源量を把握するための調査を進めています。

Educational Activities Led by Nature Guides

People who have obtained enough knowledge and skills through prefecture-held lectures are certified as Toyama Nature Guides.



自然解説員による解説活動

富山県の開催する講座を受講し、所定の知識・技能を身に付けた人を、富山県自然解説員として認定しています。

Removal of Non-native Plants

In order to protect the native species of the Tateyama mountain area, such as alpine plants native to the area, removal of non-native plants is performed to help prevent their spread and reproduction.



外来種除去活動

高山植物など立山の在来種の保全、外来植物の拡散・増殖の防止を目的とし、外来植物の除去活動を行っています。

Tateyama Midagahara and Dainichidaira, a Ramsar Site

Tateyama Midagahara and Dainichidaira is an alpine wetland registered as a Ramsar Site in 2012. The registered site spans 574 hectares at elevations from 1,040 meters to 2,120 meters, including snowpatch grassland (a wet grassland with many subalpine ponds and swamps) and Shomyo Ravine and the powerful Shomyo Falls. It is also the first registered snowpatch grassland within Japan.

「立山弥陀ヶ原・大日平」がラムサール条約の登録湿地に

「立山弥陀ヶ原・大日平」が、ラムサール条約の登録湿地として、2012年に登録されました。

登録地は、面積574ha、標高1,040m～2,120mで、雪田草原（亜高山性の池塘を多く含む湿性草原）である弥陀ヶ原・大日平と豊富な水量を誇る称名深谷と称名滝からなります。雪田草原としては国内初の登録となりました。



Protecting the Rock Ptarmigan



ライチョウの保護

Rock ptarmigans are birds that live in the alpine zone of mountains. Because of their inability to adapt to changes in the environment, there have been significant reductions in their populations nationwide. However, in Toyama Prefecture, home to Japan's largest rock ptarmigan population, their numbers have been kept consistent for the past 40 years, through the collaborative efforts of both citizens and local governments toward environmental conservation.

高山帯に暮らすライチョウは、環境変化の影響を受けやすく、全国的には生息数が大幅に減少しています。幸い、国内最大の生息地である富山県では、県民と行政が協力して自然保護に取り組み、生息数は40年前と同様に安定的に維持されています。



Tateyama Mountain Range viewed from Raichozaawa campground, home to rock ptarmigans
ライチョウが生息する雷鳥沢野営場から見た立山連峰

The rock ptarmigan is a bird that makes its habitat primarily in the mountainous areas of central Japan, and its capture has been locally prohibited for centuries. Since then, the protection efforts for this long-treasured bird species have included its registration as a national protected species and its recognition within the Red List of the Ministry of the Environment as a vulnerable species.

However, due to an increase of both sightseers and natural predators, populations have dwindled nationwide in recent years.

In Toyama, various countermeasures to protect the rock ptarmigan have been undertaken with the cooperation of citizens, including population surveys, disease surveillance, vegetation restoration, and installation of protective fences. These protection efforts have led the Tateyama mountain area to be home to Japan's largest rock ptarmigan population, with their numbers remaining more or less consistent for the past 40 years.

ライチョウは、主に日本中部の山岳地帯に生息し、江戸時代から加賀藩では捕獲が禁止され、以降、特別天然記念物への指定や環境省のレッドデータブックの絶滅危惧種に指定されるなど古くから大切に保護されてきた貴重な鳥です。

しかし、近年、観光客の増加や天敵の増加の影響により、全国では生息数が減少していることが報告されています。

富山県では、生息調査、病原菌の監視、植生復元、保護柵の設置など環境保全対策を県民と協力して実施しており、その結果、国内最大の生息地である立山では、この40年来、おおむね生息数が安定的に維持されています。



Protective fences for the rock ptarmigan
ライチョウの保護柵の設置



Population of the rock ptarmigan
ライチョウ生息数

	1975-1984 (S50年代)	1998-2007 (H10年代)
Toyama (県内)	1,300	1,300
Japan (全国)	3,000	2,000

Japan's First Discovery of a Modern-day Glacier

Until recently, there were thought to be no glaciers within Japan. In 2009, a study was undertaken to explore whether the large-scale perennial snow patches on the Tateyama Mountain Range might actually be glaciers. The study found that three of the perennial snow patches on Mt. Tateyama and Mt. Tsurugi are actually glaciers that are still flowing. In 2012, a research paper on the glaciers in Toyama was published, bringing it academic recognition. The glaciers on the Tateyama Mountain Range are the southernmost glaciers in the Far East.

国内初の現存する「氷河」を発見

いまで、現在の日本に氷河は存在しないと考えられていました。富山県では2009年から立山連峰の大規模な万年雪で氷河の可能性を探る観測をはじめました。その結果、立山と剣岳にある3つの万年雪は現在でも流動している氷体を持つ氷河であることが分かりました。2012年には論文が学術的に認められています。

立山連峰の氷河は極東地域で最南端に位置する氷河といえます。





International Environmental Cooperation

国際環境協力

To help protect the environment throughout the Northwest Pacific region, Toyama Prefecture cooperates with international organizations for marine environmental conservation, and works actively with local municipalities in China, Japan, Korea, and Russia.

富山県では、北西太平洋地域の環境保全のため、国際機関と連携した海洋環境の保全や日本、中国、韓国、ロシアの地方自治体との交流に積極的に貢献しています。

Collaboration with the United Nations

国連との連携



The Northwest Pacific Action Plan (NOWPAP) is one of the Regional Seas Programmes under the United Nations Environmental Programme (UNEP), in which China, Japan, Korea, and Russia participate. Since its establishment in Toyama City in 2004, operation of the Regional Coordinating Unit (RCU) of NOWPAP has been supported by Toyama Prefecture.



Assessment of Seagrass bed distribution by using remote sensing techniques
リモートセンシングによる藻場の調査

The Northwest Pacific Region Environmental Cooperation Center (NPEC) is a host organization of the Special Monitoring and Coastal Environment Assessment Regional Activity Centre (CEARAC) of NOWPAP, which has implemented assessment and monitoring of coastal environment by application of remote sensing techniques. Toyama Prefecture supports the NPEC's environmental activities.

Coastal environment by application of remote sensing techniques. Toyama Prefecture supports the NPEC's environmental activities.

国連環境計画(UNEP)が提唱し、日本・中国・韓国・ロシアが参加する北西太平洋地域海行動計画(NOWPAP)地域調整部を2004年に本県が誘致し、運営を支援しています。

環日本海環境協力センター(NPEC)は、NOWPAPの地域活動センターの1つ(CEARAC)に指定され、人工衛星によるリモートセンシング技術を活用した沿岸環境評価等を実施しています。

本県は、NPECの活動を支援しています。

Collaboration with Local municipalities in Northeast Asia

北東アジア地域の地方自治体との連携

Coordination of NEAR Environmental Sub-Committee

北東アジア地域自治体連合 (NEAR) 環境分科委員会のコーディネート



The Association of North East Asia Regional Governments (NEAR) is an international organization with the goal of promoting interaction, cooperation, and development in the Northeast Asia region and contributing to world peace. NEAR features fourteen sub-committees; Toyama Prefecture has worked as coordinator of the Environmental Sub-Committee. The Environmental Sub-Committee consists of 22 municipalities in four countries, and works to facilitate the exchange of information as well as various projects, such as joint research among the member municipalities.

北東アジア地域自治体連合 (NEAR)は、北東アジア地域の交流・協力の促進、共同发展及び世界平和への寄与を目的に設立された国際組織です。

14の分科委員会が設けられ、本県は環境分科委員会のコーディネート自治体を務めています。

環境分科委員会には4カ国22自治体が参加し、情報交流や共同調査等の個別プロジェクトを実施しています。

The NEAR Environmental Sub-Committee
北東アジア地域自治体連合 環境分科委員会



'2016 Environmental Expert Meeting among Northeast Asia Region' and 'Toyama Declaration 2016'

Following the G7 Toyama Environment Ministers' Meeting in May 2016, Toyama Prefecture held 2016 Environmental Expert Meeting among Northeast Asia Region with representatives from municipalities and universities in China, Japan, Korea and Russia. The participants discussed current environmental issues to be addressed in a region and/or local level including climate change, biodiversity and marine litter, which were also covered in the G7 Toyama Meeting, and adopted 'Toyama Declaration 2016' to solve environmental problems in the Northeast Asia region.

[2016北東アジア自治体環境専門家会合inとやま]の開催と「2016とやま宣言」の採択

2016年5月のG7 富山環境大臣会合をふまえて、今後の北東アジア地域における環境保全に向けた連携強化を図るため、日本・中国・韓国・ロシアの自治体や大学等の専門家が参加し、「2016北東アジア自治体環境専門家会合 inとやま」を開催しました。

大臣会合で議題となった、気候変動、生物多様性、海洋ごみを中心に、地方や自治体レベルで今後取り組むべきことについて確認し合い、北東アジア地域の環境問題の解決に向けた「2016とやま宣言」を採択しました。



2016 Environmental Expert Meeting among Northeast Asia Region



2016北東アジア自治体環境専門家会合inとやま



Panoramic view of the Tateyama Mountain Range over the Shinminato Bridge, seen from the Kaiwomaru Park
海王丸パークから新湊大橋越しに立山連峰を望む



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